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ABSTRACT

This annual report describes, through narrative and statistical tables, the progress made in 1976 by the World Fertility Survey (WFS), an international population research program. The function of the WFS is to assist a large number of interested countries, particularly the developing countries, in carrying out nationally representative, internationally comparable, and scientifically designed and conducted surveys of human fertility behavior. An introduction provides information on the background, history, and major goals of the survey. The report distinguishes between developed and developing countries in its country by country breakdown of progress and participation in the WFS. A section on program developments describes the status of the instruments and methodology used by the survey, including its questionnaires, modules, documentation, special field studies, data processing, and various methods of information dissemination. Proceedings of committees and meetings associated with the WFS are summarized, and lectures given on the topic of the survey are listed. The four appendices contain listings of the following: international experts consulted by the WFS, the year's visitors to the WFS Professional Centre in London, the publications of the WFS, and the libraries in the WFS depository system. (Author/MK)

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# The World Fertility Survey: January 1976 - December 1976

*Annual Report*

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The World Fertility Survey is an international research programme whose purpose is to assess the current state of human fertility throughout the world. This is being done principally through promoting and supporting nationally representative, internationally comparable, and scientifically designed and conducted sample surveys of fertility behaviour in as many countries as possible.

The WFS is being undertaken, with the collaboration of the United Nations, by the International Statistical Institute, in cooperation with the International Union for the Scientific Study of Population. Financial support is provided principally by the United Nations Fund for Population Activities and the United States Agency for International Development.

This publication is part of the WFS Publications Programme which includes the WFS Basic Documentation, Occasional Papers and auxiliary publications. For further information on the WFS, write to the Information Office, International Statistical Institute, 428 Prinses Beatrixlaan, Voorburg, The Hague, Netherlands.

### CORRIGENDA

World Fertility Survey Annual Report 1976

Chapter 2, Section 2.1, page 26, third paragraph, should read as follows:

**Lesotho**

A survey design visit was made to Lesotho in June 1976 and a project proposal was drawn up with the executive agency, the Department of Statistics.

Chapter 2, Section 2.1, page 36, Table I, should read as follows:

Country	National Director/ Survey Director	National Executive Agency	WFS Staff Co-ordinator
Cameroon	N. Ngae and A. Nkougourou	Directorate of Statistics	L. Williams Benoit Ferry (Resident Adviser)

# Contents

1.	INTRODUCTION	7
2.	PROGRESS OF COUNTRIES IN THE WFS PROGRAMME	12
2.1	The Developing Countries	12
2.1.1	Status of On-Going Surveys	12
2.1.2	Associate Status	29
2.1.3	Future Enrolment	30
2.2	The Developed Countries	42
3.	PROGRAMME DEVELOPMENTS	45
3.1	WFS Documentation	45
3.1.1	Modifications to the Core Questionnaire	45
3.1.2	Modules	45
3.1.3	Core Questionnaire for Husbands	47
3.1.4	Summary of Status of WFS Documentation	48
3.2	Special Field Studies	51
3.2.1	Linguistic Study in Cameroon	51
3.2.2	Pilot Study on Availability of Fertility Regulation Methods	53
3.2.3	Post-Enumeration Surveys	55
	<i>Bangladesh</i>	56
	<i>Fiji</i>	57
	<i>Indonesia</i>	58
	<i>Pakistan</i>	59
3.3	Data Processing	60
3.4	Developments in Data Analysis	62
3.5	Technical Monitoring	65
3.6	Information and Publications	66
4.	COMMITTEES	69
4.1	WFS Permanent Committees and <i>Ad Hoc</i> Meetings	69
4.1.1	Programme Steering Committee	69

4.1.2	Technical Advisory Committee	72
4.1.3	Staff Meeting	74
4.1.4	Working Group on Strategies for Analysis	74
4.1.5	Meeting on Staff Requirements	74
4.1.6	Regional Meeting on Data Processing - Caribbean	75
4.1.7	WFS Regional Technical Meetings	75
4.2	WFS Participation in Other Meetings	76
4.2.1	Meeting on CONCOR Editing Package	76
4.2.2	UN Standing Working Group on Social Demography	76
4.2.3	Sixth International POPLABS Conference	76
4.2.4	UN Meeting on Data Processing in Developing Countries	77
4.2.5	OECD Working Group Meeting	77
4.2.6	UNESCAP Committee on Statistics	77
4.3	Lectures	78
4.3.1	Institute of Social Studies, The Hague	78
4.3.2	University of Louvain 'Quetelet Chair 1976'	78
4.3.3	Lectures on WFS to University of Arkansas and Florida State University	78
4.3.4	Statistics Canada	78
4.3.5	U.S. Department of Health and Welfare	78
4.3.6	Institute for Professional Education, Virginia, U.S.A.	79
5.	PERSONNEL	80
5.1	WFS Staff	80
5.1.1	WFS Professional Centre, London	80
5.1.2	ISI Permanent Office, The Hague	82
5.2	UN Liaison Officers	82
TABLE I:	Present and Projected Participation of the Developing Countries in the WFS Programme	32
TABLE II:	Present and Future Participation of the Developed Countries in the WFS Programme	43
TABLE III:	Success Rate of PES in Fiji	58

<b>TABLE IV:</b>	<b>Sample Selection of PES in Pakistan</b>	<b>59</b>
<b>TABLE V:</b>	<b>Status of Editing and Tabulation Software in WFS Surveys</b>	<b>61</b>
<b>CHART:</b>	<b>WFS Objectives and Activities</b>	<b>8</b>
<b>MAP:</b>	<b>International Participation in the WFS</b>	<b>101</b>
<b>APPENDIX I:</b>	<b>International Collaboration: A List of Experts Consulted by WFS</b>	<b>84</b>
<b>APPENDIX II:</b>	<b>List of Visitors to the WFS Professional Centre, London</b>	<b>90</b>
<b>APPENDIX III:</b>	<b>List of Publications Available as of 31 December 1976</b>	<b>93</b>
<b>APPENDIX IV:</b>	<b>List of Libraries in the WFS Depository System</b>	<b>95</b>

## ABBREVIATIONS USED IN THE REPORT

CELADE	Centro Latinoamericano de Demografía
CLUSTERS	WFS program for calculation of standard errors
COCENTS	Tabulation package developed by the U.S. Bureau of the Census, adopted for WFS purposes
CONCOR	Editing package developed by CELADE and WFS
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ESCAP	Economic and Social Commission for Asia and the Pacific
ICL	International Computers Limited
ILO	International Labour Organization
INED	Institut National d'Etudes Démographiques
IPPF	International Planned Parenthood Federation
ISI	International Statistical Institute
ISPC	International Statistical Programs Center, U.S. Bureau of the Census
IUSSP	International Union for the Scientific Study of Population
OECD	Organization for Economic Co-operation and Development
ORSTOM	Office de la Recherche Scientifique et Technique Outre-Mer
PES	Post-Enumeration Survey
POPLABS	Population Laboratories
PSC	Programme Steering Committee
TAC	Technical Advisory Committee
UNDP	United Nations Development Programme
UNFPA	United Nations Fund for Population Activities
USAID	United States Agency for International Development
WFS	World Fertility Survey
WHO	World Health Organization

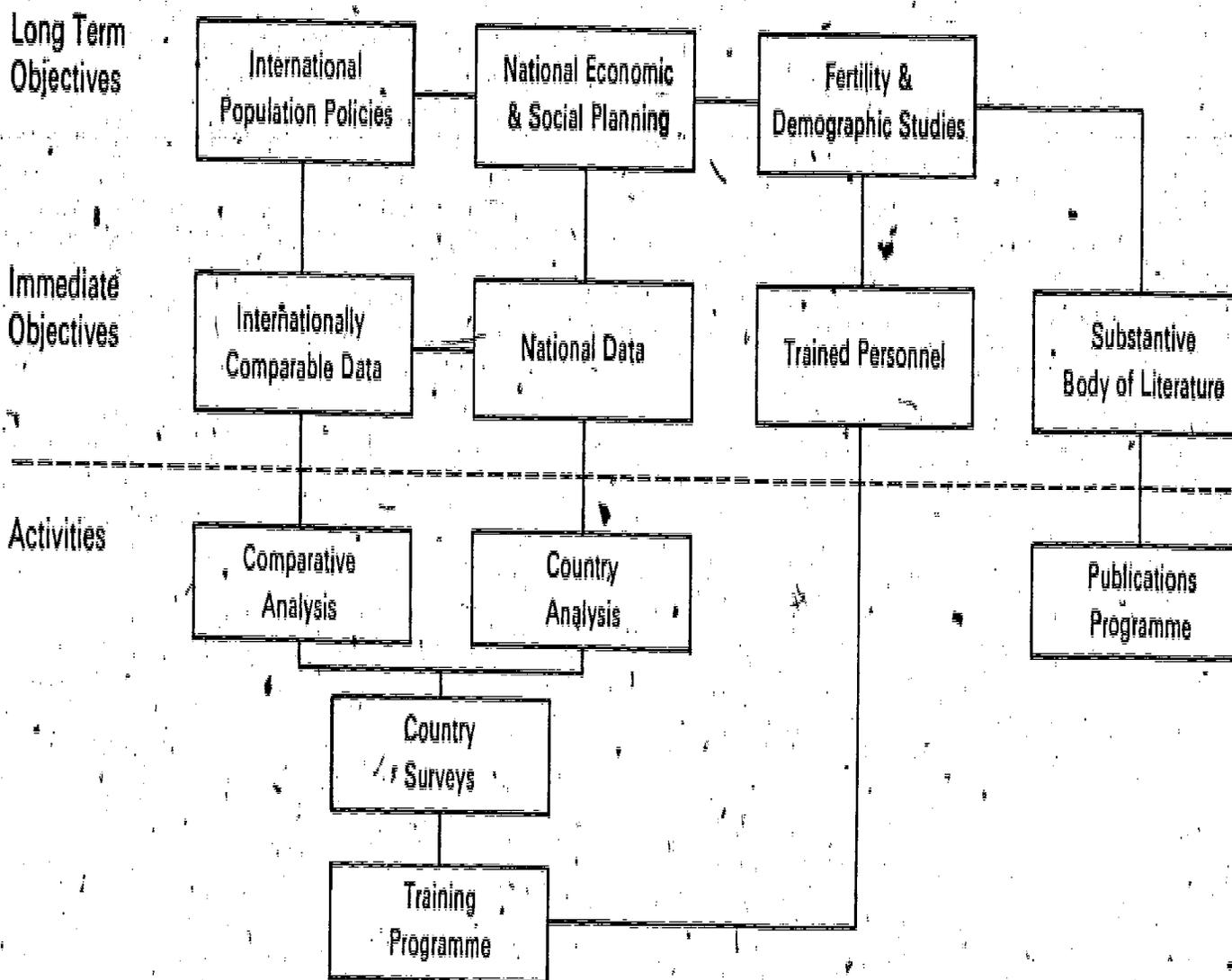
# 1 Introduction

The World Fertility Survey (WFS) is an international population research programme whose purpose is to assist a large number of interested countries, particularly the developing countries, in carrying out nationally representative, internationally comparable, and scientifically designed and conducted surveys of human fertility behaviour. The WFS was begun in 1972 in response to the announcement of World Population Year 1974 and the United Nations' call for concerted world action on population matters. It is being undertaken by the International Statistical Institute (ISI) with the collaboration of the United Nations, and in cooperation with the International Union for the Scientific Study of Population (IUSSP). The WFS is financed by grants to the ISI from the United Nations Fund for Population Activities (UNFPA) and the U.S. Agency for International Development (USAID). The primary aim of the WFS programme is to assist countries to acquire the scientific information that will permit them to describe and interpret their populations' fertility. A second purpose is to increase national capacities for fertility and other demographic survey research particularly in developing countries. A third purpose is to collect and analyse data on fertility which are internationally standardized and therefore permit comparisons from one country to another.

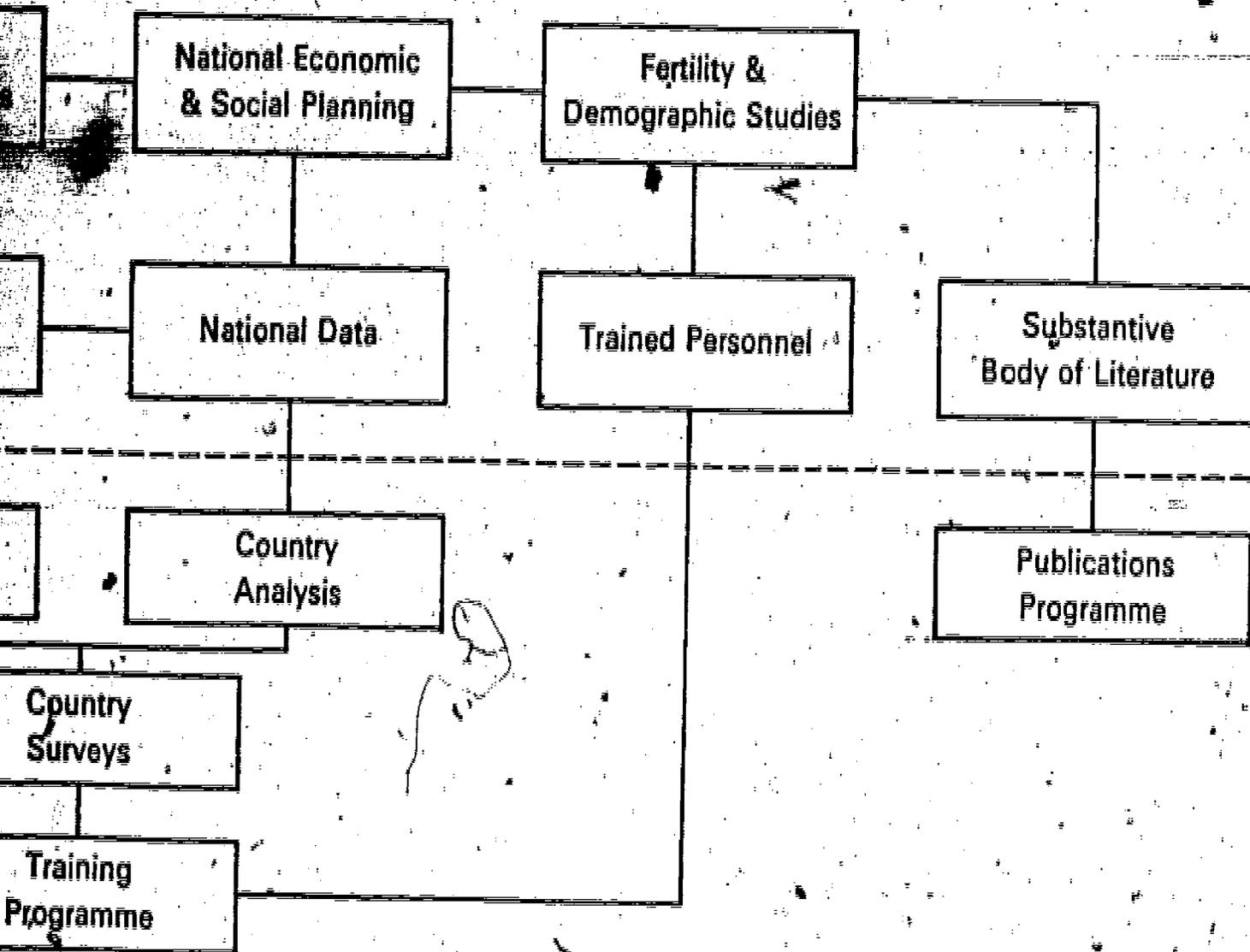
During the past the WFS has been primarily concerned with the first two objectives which are complementary rather than competitive. Now that the WFS is entering into the Analysis Phase, it is intended to start working on a plan for the comparative analysis, which will be undertaken only after a certain number of the national surveys have been completed. Many organizations and research workers have already communicated to WFS their desire to collaborate in this aspect of the project.

Aimed at achieving the first two objectives - the provision of data for national needs and the institutionalization of country survey-taking capacity - the national surveys are planned and implemented invariably by the local staff filling the posts of Survey Director, Supervisors and other field staff; and with the editing, coding, data processing and report writing being done, wherever possible, in the country concerned with full participation of local staff. The transfer of technical knowhow has continued to be a major objective of the WFS. The technical documentation, contained in the Basic Documentation Series, is available in English, French, Spanish and Arabic. The Core Questionnaires (Household Schedule and Individual Questionnaire) are the results of considerable, international input of expertise. Large sections of the manuals

# World Fertility Survey



# World Fertility Survey



are directly adaptable to future surveys which the countries may undertake in other fields and are of lasting value, acting as a model. Since country participation is conditional on acceptance of rigorous WFS procedures including a detailed budget, time-table, manpower-planning and continuous monitoring of operations, the national staff participate in a working example of sound survey organization. Many survey directors have indicated to WFS that this has led to an altogether new, and hopefully enduring, standard of survey administration.

Following are some of the main features of the WFS operations which are expected to have a lasting impact on the future survey work in the participating countries.

- 1) Use of local languages in the survey questionnaire. For instance, in Kenya, where no previous survey has used more than two languages – English and Swahili – the WFS questionnaire will be prepared in 10 main languages.
- 2) The use of female interviewers.
- 3) Intensive training of the field workers. The interviewers' training in WFS has nearly always lasted 3 weeks with extensive use of tape recorders. To date, some 1700 field workers have received training for WFS surveys in developing countries.
- 4) Monitoring of field work through use of a) field organization based on teams, b) field editors attached to each team who detect errors within 24 hours and feed back the information to the field worker concerned and c) extensive tape recording of interviews for quality control purposes.
- 5) In the area of data processing, WFS has sponsored the development of an editing package, CONCOR, a project initiated by CELADE but brought to fruition in joint work with WFS. The package is unique and will be of use to all countries with small computers, whatever the subject matter of the survey. Again, WFS has developed and is making available free a package, CLUSTERS, for computation of sampling errors and related statistics. WFS provides on-the-job training to local staff on the use of these packages and the tabulation package COCENTS. The input of technology is limited only by WFS' inability

to ensure that the personnel thus trained remain at the disposal of the national statistical office.

- 6) WFS provides on-the-job assistance in report-writing in the preparation of the Country Report No. 1 and also plans to provide similar assistance in the country analysis beyond the First Report.

The Implementation Phase of the WFS programme has achieved significant progress and momentum since its beginning in 1974. The most important feature in 1976 was the number of countries which had completed or virtually completed their Country Report No. 1: Dominican Republic and Pakistan (published); Fiji, Malaysia, Thailand (at press); and Bangladesh, Korea, Panama and Sri Lanka (in preparation). Another significant feature is the increasing number of participating countries, mainly in the African and Latin American regions. See Status of On-Going Surveys, p. 12, for a detailed discussion of current country involvement. A visual summary is given on page 101, International Participation in the WFS Programme.

The international response to the WFS, in terms of countries wishing to participate, was in 1975 already beyond earlier expectations. In order to incorporate as many countries as possible, it was thought desirable to extend the WFS beyond the scheduled termination date of June 1977. Consequently, the major funding agencies, USAID and UNFPA, undertook an evaluation of the programme; an Evaluation Task Force reviewed the WFS at its Professional Centre in October 1975. In May 1976 the Research Advisory Committee, of USAID formally extended the WFS for a further three years, to June 1980. UNFPA, the other principal funding agency, is to submit a proposal for a five-year programme extension before the UNDP Governing Council to be held in January 1977. Other donor countries are also being approached for funds for WFS.

During 1976 an increasing number of organizations, university research centres and individual researchers have indicated their desire to collaborate with the WFS. The entire WFS research operation is, in fact, an international collaborative venture, establishing contact with individuals and organizations throughout the world. The very undertaking of a WFS survey in a country entails the cooperation of the Government, executive agency, survey personnel, field staff, clerical staff, data processing personnel, and miscellaneous others.

In addition, the WFS in an effort to maintain a high level of standard and performance has called upon expert advice and services from individuals and organizations. As the

early participating countries in the WFS programme are reaching the data processing and analytical stages, the WFS is cooperating and collaborating with an increasing number of internationally recognized specialists as well as established agencies. As WFS endeavours to establish a truly international research programme, an international expert contribution to the technical thinking and survey operations is deemed necessary. A list of the experts serving in their individual capacities who have been working in close cooperation with the WFS during 1976 is found in Appendix I.

## 2 Participation and progress of countries in the WFS programme

### 2.1 THE DEVELOPING COUNTRIES

In its third year of implementation, the WFS continues to attract countries wishing to participate in this programme. Interest is still growing in Latin America while countries in Africa started participating in the WFS programme with the involvement of Cameroon, Kenya and Lesotho. Some of the earlier participating countries are now producing the Country Report No. 1 on their fertility surveys.

At the close of 1976, thirty-five developing countries were either firmly committed or actively participating in the WFS programme. Table I summarizes the status of on-going surveys, together with those which are envisaged. The following reports give a country-by-country account of survey operations in the various regions.

#### 2.1.1 STATUS OF ON-GOING SURVEYS

Full-scale WFS surveys are in operation in the following countries:

##### ASIA

##### **Bangladesh**

The national executive agency for the Bangladesh Fertility Survey (BFS) is the Ministry of Health, Population Control and Family Planning. National Director is Mr. A. R. Khan. Field work for the BFS was completed on schedule at the end of March 1976. Office editing, coding and punching of questionnaires were done as they were received at the Dacca headquarters of the BFS. Computer editing was undertaken with the aid of programs written by data processing personnel in Bangladesh and was completed by the end of November 1976; the tabulations for Country Report No. 1, using the COCENTS program developed by the U.S. Bureau of the Census, were ready in December. The draft report is scheduled for the end of February 1977. A report on the administrative and methodological problems encountered in the Bangladesh Fertility Survey should be available in January 1977.

On termination of the main survey's field work, a quality control cum post-enumeration

tion survey (PES) was undertaken in April-May 1976 to check the listing of households, verify responses in the community questionnaire, follow-up non-response by households and women; and to reconcile critical discrepancies and errors detected in the editing operations. See page 56 for a detailed 'Special Field Studies' discussion of the PES, report of which is in preparation.

A national seminar was organized by the Bangladesh Fertility Survey, under the Ministry of Health, Population Control and Family Planning, at Cox's Bazaar, Bangladesh, in December 1976 to explore the lines of further analysis for the Bangladesh data. This seminar was attended by professionals from universities, the Bangladesh Institute of Development Studies, the Bureau of Statistics and the Cholera Research Laboratory and some demographers. The WFS was represented by Dr. Mahbub Ahmad.

#### **Burma**

A series of preliminary discussions with the Government of Burma were held by Mr. Basilio Aromin, U.N. Liaison Officer to WFS for the Asian region from 17-25 June and 20-29 July 1976 in Rangoon. Burma has expressed the desire to participate in the WFS programme in 1977. Contact was made with Mr. Myint Tin, Director General of the Central Statistical Organization, Mr. U. Thein Han and Mr. U. Zin Maung (Assistant Directors in the Census Data Processing Branch of the Department of Immigration and Manpower), and with Mr. U. Khein Win, UNDP office.

#### **Fiji**

The Country Report No. 1 for the Fiji Fertility Survey (FFS), carried out by the Bureau of Statistics with Mr. Ali Sahib as Survey Director, was completed, approved by the Government of Fiji and sent to press in September 1976. It will be released in January 1977.

As the FFS was the first survey to be undertaken in the WFS it served as a pilot study for organization and methodology. The FFS was started in 1973. The side effects of a developing WFS, with basic documents still in preparation and the absence of data processing packages and fully tested survey tools, contributed to the considerable delay in preparation and publication of the Fiji report.

The tables in the report itself adhere closely to the WFS document, Guidelines for Country Report No. 1 (WFS/TECH. 225), though compression of variables and other modifications were frequently necessary to suit the circumstances of Fiji, particularly the existence of two major ethnic groups for whom separate reporting was

desirable. The report, which contains about a hundred pages of text and nearly two hundred pages of tables, is available from the Government Printer, Printing and Stationery Department, P.O. Box 98, Suva, Fiji, at a price of US\$3.

Additional tables on the birth history in the WFS Core Questionnaire have been produced for Professor A. Coale of Princeton University and Professor W. Brass of the London School of Hygiene and Tropical Medicine, to enable them to carry out methodological analyses on the quality of data on births. Fiji data will also be used in the preparation of Technical Bulletins to illustrate the application of the various aspects of analysis.

A Post Enumeration Survey (PES) was conducted some seven weeks after completion of the main field work in mid-1974. The objective of the PES was to re-interview a small sub-sample of women (500) and to compare their answers with those they originally gave at the time of the main interview. By examining the consistency between the paired answers and the nature of discrepancies, it is hoped to gain insight into the reliability of the main survey data. For more details, see 'Special Field Studies' page 57. The analysis is being conducted by Dr. K. Srikantan of the Population Council.

#### **Indonesia**

Field work for the Indonesia Fertility Survey (IFS) being undertaken by the Central Bureau of Statistics (CBS), was successfully carried out and finished in June 1976. Survey Director is Mr. Sam Suffarto.

Office editing was also finalized during the year. The office editors were recruited from the pool of permanent office workers of the CBS. By November, all pre-data processing activities were carried out. Machine editing started in November, and a special edit program was developed in collaboration with the WFS and the resident UNDP advisor for data processing. The WFS recommended edit-package, CONCOR, was not used because no version for ICL machines was available yet. Machine editing is expected to be completed by the end of February 1977. Tabulations are planned to start in March 1977 and completion of the Country Report No. 1 is expected by the end of 1977.

CBS data processors have extensive experience in the use of COCENTS (the package recommended by WFS for tabulations), so this package will be used in the preparation of the tabulations for Country Report No. 1.

A reliability study for the IFS was undertaken in Indonesia. The primary objectives were to assess the stability and reliability of responses obtained from the IFS, with particular emphasis on the pregnancy history. A subsample of the main survey

respondents were re-interviewed with a shortened and modified version of the IFS questionnaire from 9 August to 4 September 1976. For further details see 'Special Field Studies'.

#### **Korea, Republic of**

The Korean National Fertility Survey has been undertaken by the Bureau of Statistics and Korean Institute for Family Planning. Field work was carried out in 1974.

The machine editing of both the Individual Questionnaire and the Household Schedule files was completed in early 1976. After some delay due to sample adjustment problems, the recoding of variables needed for Country Report No. 1 was also completed. The tabulation package (COCENTS) being used by WFS was installed and tested. A COCENTS course was conducted and card decks of the COCENTS parameters specific to Country Report No. 1 tables were produced.

Dr. Yuzuru Takeshita of the University of Michigan, previously on the WFS staff and Country Co-ordinator for Korea, visited this country in mid-1976 to assist with the writing of Country Report No. 1. Drafts of the first two chapters have been reviewed by Dr. Takeshita. The substantive sections are now being prepared and Mr. E. H. Choe, the Survey Director, plans to visit WFS London offices in January 1977 to discuss the entire draft. The report, previously scheduled for publication at the end of 1976, should now appear in early 1977.

#### **Malaysia**

The Malaysian National Fertility Survey which is being undertaken by the Department of Statistics and the National Family Planning Board, carried out field work in 1974. Machine editing was completed and a clean data tape was available; the International Statistical Programs Center (ISPC) provided technical assistance in the installation of the ICL version of the tabulation program based on COCENTS.

Mr. R. Chander, National Survey Director, and Mr. V. T. Palan, Local Survey Director, visited the WFS Professional Centre in London to discuss the draft of Country Report No. 1. After further discussions with the WFS staff in late 1976 the report was finalized and expected to be available early in 1977.

The Malaysian Government has expressed its desire to collaborate with the University of Michigan in carrying out further analysis of their survey data. The plans for such analysis are being prepared and work is expected to commence in 1977.

A prototype analysis plan for the data from the Module on Community-level Variables using the Malaysian survey data, with the additional objective of analysing the

Malaysian data themselves, has now been finalized. This project is being carried out at the University of Michigan jointly by Mr. V. T. Palan from Malaysia and Professor W. Mason of the University of Michigan, under the supervision of Professor R. Freedman, who was responsible for the preparation of the module.

#### **Nepal**

The Nepal Fertility Survey is being carried out by the Nepal Family Planning and Mother and Child Health Project in the Ministry of Health. Training of field staff for the Nepal Fertility Survey (NFS) was conducted in March and field work started in early May 1976. Despite apprehensions about difficulties in co-ordination and control by survey headquarters due to distance and travel limitations, the field work progressed without mishap and, in fact, ended prior to the scheduled date. In a field monitoring visit by a WFS staff member, 15 of the 17 interviewing teams were visited. Twenty of the best interviewers carried out the coding. Independent double-coding of maternity histories was undertaken. Most of the machine editing was carried out in Nepal with assistance from Mr. John Adams, U.N. expert in Bangladesh. Following this, Mr. Jayanti Tuladhar, survey director, visited London, when the remaining editing work and construction of the variables were completed. Within a period of five months after completion of the field work, a clean data tape with all the variables was ready. The tabulations are being run by Mr. Tuladhar with the assistance of the University of California at Berkeley and are scheduled to be available in early 1977. The Country Report No. 1 is expected by mid-1977. The senior staff of the NFS have agreed, in principle to produce a report on the problems encountered in carrying out a national survey in mountainous terrain with limited transportation and communication facilities.

#### **Pakistan**

The Pakistan Fertility Survey (PFS) was carried out by the Training and Research Evaluation Center of the Population Council of Pakistan with main field work undertaken in 1975. Mr. Nizamuddin was Project Director until September 1976 after which he was succeeded by Mr. Khalil Siddiqi.

The pre-data processing activities were successfully completed in 1976. The machine-editing was done by using the EDIT program of the MINITAB package.

The tabulations for Country Report No. 1 were prepared by local professionals using a modified version of the TAB program of the MINITAB packages. The Country Report No. 1 has been published and is available from Population Planning Division, Government of Pakistan, Islamabad, Pakistan.

A post-enumeration study (PES) designed to compare the reliability of data from an integrated pregnancy history (employed in the National Impact Survey 1968-1969) and the separate pregnancy history (used in the PFS 1975), as well as to ascertain the stability of factual information and attitudes expressed in the PFS, was undertaken in Pakistan from May through July 1976. A comprehensive report of the PES is found under 'Special Field Studies', page 59.

#### **Philippines**

A survey design visit was made to Philippines by WFS staff in September 1976, and resulted in the following proposal for the Philippines Fertility Survey. For the survey, to be carried out by the National Census and Statistics Office (NCSO), a national sample of 15,000 households, yielding approximately 15,000 women for interview, would be selected with disproportionate allocation to allow for sub-national estimates. The NCSO will have the collaboration of the Population Institute of the University of the Philippines and the Population Commission. Mr. Tito Mijares, Director of the NCSO is the Project Director and Dr. Mercedes Concepcion is Co-Project Director. The WFS Core Questionnaire will incorporate the modules on Factors other than Contraception Affecting Fertility, Abortion, Fertility Regulation and most probably the Community-level Module. Field work is tentatively scheduled for January through February 1978.

#### **Sri Lanka**

The Ministry of Planning and Economic Affairs and the Department of Census and Statistics are the executive agencies for the Sri Lanka Fertility Survey. National Director is Mr. S. A. Meegama. Field work was undertaken in 1975 and office editing finished in early 1976. The WFS provided assistance in machine editing and tabulation, using CONCOR and COCENTS. As the CONCOR package was not compatible with the computer available in Colombo, extra WFS input had to be provided, involving slippage in the original time schedule. Dr. T. Pullum from the WFS Professional Centre visited Sri Lanka in November 1976 to assist with the preparation of the Country Report No. 1 which is scheduled for completion by mid-1977.

#### **Thailand**

The Survey of Fertility in Thailand is being carried out by the National Economic and Social Development Board, National Statistical Office and the Institute of Population Studies. Mrs. Anuree Wanglee and Mr. Visid Prachuabmoh are co-directors of the

survey. Computer editing of the data for the survey was completed in early 1976. The MINITAB package was used to edit the data from the individual questionnaire. For the rest, *ad hoc* programs developed in Thailand were used.

Tabulation plans for the main survey were drawn up using the COCENTS program by Khun Pichai of the National Statistical Office, Bangkok, and Mr. Braddock of the ISPC, U.S. Bureau of the Census. A WFS staff member visited Thailand in May to assist with the tabulations, and again in early November to finalize the draft of the Country No. 1. Two members of the national executive agencies for the survey had visited WFS London Professional Centre in September 1976 to discuss the draft report prepared in Thailand. Sampling errors for the main survey variables were computed at London using CLUSTERS. The report is scheduled to be published in early 1977.

#### LATIN AMERICA

##### Chile

The project request for the Chile Fertility Survey was drawn up in a WFS survey design visit undertaken in October 1976. This request has been submitted to UNFPA. The executing agency will be the National Statistical Institute, with the collaboration of the Department of Public Health and Social Medicine of the Faculty of Medicine 'Santiago Norte' of the University of Chile. Preparatory work for the survey is scheduled to start in April 1977. The main field work will take place from mid-September to mid-December 1977. Publication of the Country Report No. 1 is planned for September 1978.

The survey design calls for interviewing all women aged 15-49, irrespective of their marital status, from a nationally representative sample of 5,000 dwelling units. These are expected to yield 5,500 women for interview. The WFS Core Questionnaire will be used, incorporating an integrated pregnancy history and the modules on Abortion, Fertility Regulation, and Factors other than Contraception Affecting Fertility. Field work will be conducted by 5 teams consisting of 2 supervisors and 6 interviewers each. The interviewers will all be female, and preferably midwives, who in Chile are highly qualified university graduates.

##### Colombia

The national executive agency for the Colombia Fertility Survey is the Corporación Centro Regional de Población. Survey Director is Ms. E. Prada. Supervisors' training

was completed in January and interviewers' training in March. Field work started in May and lasted until September 1976. Twelve supervisors and 30 interviewers were used initially. Later the number of interviewers was increased to 36 and field work was completed ahead of schedule. 9,790 completed household schedules were obtained and 5,391 individual interviews. Editing and coding of the questionnaires started on 7 June. Household schedules were edited and coded by a team of 4 persons. Individual questionnaires were processed in two stages by a team of 5 editors and a team of 8 coders, one of the latter specializing in occupation. All data were verified on a 100 per cent basis. Both coders and editors received about a week's training before starting their work. Machine editing started in October and is still continuing, due to programming problems. Structural editing was completed but further editing will be finalized by using a program in COBOL.

The descriptive chapters of the Country Report No. 1 have already been finalized and the final report is scheduled to be finished in July 1977.

#### **Costa Rica**

The Dirección General de Estadística y Censos in the fertility survey in Costa Rica undertook an innovation in an effort to integrate the supervisors into the preparatory work for the survey. After the pre-test, all seven supervisors were utilized in helping the listers, in mapping, in reproducing sketches in the Cartographic Department and in proof-reading the final questionnaire and manuals. In addition, during the interviewers' training, each supervisor was made responsible for presenting one section of the questionnaire. These various efforts helped to create a sense of cohesion among the supervisory staff and increased their knowledge of other aspects of the survey. The following modules were incorporated into the questionnaire: Abortion, Family Planning and Fertility Regulation. The main field work started in early July with 21 interviewers and 7 supervisors. For administrative reasons in the middle of field work the field staff were reduced to 10 interviewers and 3 supervisors. Field work was prolonged to mid-November, two months beyond the date originally scheduled. However, the quality of data was high and a 97 per cent interview rate for both the Household and Individual Interview questionnaires was recorded.

By mid-November all specifications for the programming of the data cleaning had been prepared. The actual cleaning, using GONCOR, is scheduled to begin in early January 1977.

#### **Dominican Republic**

The national executive agency for the Dominican Republic Fertility Survey (DRFS)

is the Consejo Nacional de Población y Familia (CONAPOFA). Survey Director is Mr. Nelson Ramirez.

Field work was undertaken in 1975. Cleaning of the data was completed with the assistance of CELADE in Santiago in January 1976. Tabulations for the first country report were also prepared by CELADE and preliminary tables became available in April with the final ones available in June.

A 'problems report' was prepared and published in the Occasional Papers series entitled *The Dominican Republic Fertility Survey: An Assessment of Problems and Procedures*. It was written by Nelson Ramirez, Pablo Tactuk and Ellen Hardy of the DRFS; and Martin Vaessen of WFS Central Staff.

The first Country Report No. 1 from a Latin American country was received by WFS in November 1976, published in Spanish. Further analysis is planned in a number of research projects to be published in a series of monographs. WFS is also providing the DRFS with additional tabulations to allow for analysis of data not contained in the WFS Core Questionnaire, and which are of specific interest to the Dominican Republic.

A meeting was organized by the DRFS staff for which all researchers in the field of population in the Dominican Republic were invited and in which the DRFS survey was explained. CONAPOFA then invited these researchers to submit proposals for analysis of specific topics in the available data, so as to ensure the widest possible use and dissemination of the survey results.

#### **Guatemala**

A survey design team visited Guatemala in October 1975 and a project request was prepared with the national executive agency: Dirección General de Estadística, for submission to UNFPA. The project's time-table called for preparatory activities to begin in June 1976 and the main field work was scheduled for January 1977. However due to the earthquake disaster in 1976, the survey had to be postponed for an indefinite period. Conversations with the Statistics Bureau have continued and it is expected that a new project request will be prepared during 1977, including a revised time-table to take account of changed conditions. The main field work is tentatively scheduled to take place in 1978.

#### **Mexico**

The questionnaire for the Mexico Fertility Survey, being undertaken by the Dirección General de Estadística, includes questions on migration history of husband and wife,

and maternal and child health. Survey Director is Mr. Carlos Welty. The integrated form of pregnancy history was used and the following modules were incorporated: Community Variables, Abortion and Family Planning.

Twelve supervisors and 36 interviewers were selected to start field work on 19 July, which was scheduled to end in December. However, due to flooding in 3 sample areas and to a halt in the field work during the period immediately before and after the change of Mexico's President, field work will now be completed in January 1977. The sample, approximately 7,250 women, includes all women 20-49 years of age plus women 15-19 who have had a birth or have been in a consensual union.

Editing and coding are well under way and are scheduled to finish not later than March 1977. Provisions have already been made for the recoding of the variables, and a list of tabulations additional to those in the WFS Guidelines to Country Report No. 1 has been defined. Also a checklist of internal inconsistencies for both the individual and household questionnaire has been completed for use in the computer editing stage.

#### **Panama**

The Panama Fertility Survey is being undertaken by the Oficina de Estudios de Población del Ministerio de Salud. Survey Director is Mr. F. Mascarín. Field work terminated in mid-March 1976 with 10 teams of 3 interviewers and 1 supervisor each. Coding, office editing and punching ran from April to July. A complete list of errors produced by CONCOR was corrected by the Survey Director and 2 assistants. Specifications for birth interval tables in the Guidelines to Country Report No. 1 were delayed slightly as missing data had to be imputed. This has now been done with the assistance of CELADE, which is also helping with tabulations. Tabulations are now being run and the chapters on background and methodology are available in draft form. The completed Country Report No. 1 is expected in early 1977.

#### **Peru**

A survey design visit was made to Peru from 2-16 August 1976. The Peru Fertility Survey to be conducted by the Instituto de Estadística will cover approximately 7,000 women for the individual questionnaire selected from a similar number of dwelling units. The project will get under way in January 1977 and field work is scheduled for 4 months starting from July, using 36 interviewers and 12 supervisors. The Ministry of Labour's Technical Office for Manpower Studies (OTEMO) will serve as a collaborating agency.

A number of languages and dialects will be used, including the following: Spanish, Ansash Quechua, Ayacucho Quechua, Cuzco, Quechua and Aymara. All interviewers and supervisors instructions and manuals will be in Spanish; only the questionnaires will be translated into the various dialects. The questionnaire will incorporate the Fertility Regulation Module, as well as a section on infant and maternal health care and questions on mortality.

#### **Venezuela**

WFS staff made a survey design visit to Venezuela during the last week of June. The survey period formally commenced 1 September 1976 with field work scheduled to start in February 1977. A technical advisory committee consisting of the Director-General of the Bureau of Statistics (the national executive agency), the Ministry of Health and Social Welfare, the Office for Co-ordination and Planning and the Central University of Venezuela has been set up. Survey Director is Mr. J. Paez Celiz.

The sample will cover 7 of the 8 administrative regions of Venezuela, excluding the Amazon region which only represents 1.7 per cent of the total population. All women aged 15-44 whether single, in consensual union, or ever-married, will be eligible for interview. The sample of households from which eligible women will be selected is a subsample of the Venezuelan household master sample. The sample will cover about 4,000 women. The Family Planning module and a section on the sexual life history of women over the last 12 months will also be incorporated into the questionnaire. This inclusion was suggested by the Ministry of Health and Social Welfare to assist its evaluation of family planning activity in Venezuela. Abortion will be studied indirectly by the use of an integrated pregnancy history. The pre-test was carried out in December and currently preparations are being made for the supervisors and interviewers training.

#### **CARIBBEAN**

##### **Guyana**

Field work for the Guyana Fertility Survey (GFS) being carried out by the Bureau of Statistics was undertaken in 1975. Survey Director is Ms. P. Chase. The machine editing was completed using the MINITAB edit program in August 1976. The WFS has been providing the GFS with substantial data processing assistance. A course on CONCOR, the WFS recommended package on machine editing, was also offered and a work-shop on COCENTS, the WFS recommended package on tabulations, was

organized. The packages were installed and tested by data processing from WFS London. Further assistance will probably be forthcoming.

At the Regional Meeting on Data Processing of the Caribbean surveys held in Trinidad in September 1976, COCENTS parameter coding for tabulations and edit specifications for recoding of variables based on the WFS document, Guidelines for Data Processing, had already been prepared. The analysis for Country Report No. 1 will be supervised by the WFS Regional Co-ordinator for the Caribbean.

#### **Haiti**

The national executive agency for the Haiti Fertility Survey (HFS) is the Institut Haitien de Statistique. The project was approved by the Government of Haiti in June 1976, after considerable delay, and is now formally underway with the appointment of Dr. James Allman as WFS Resident Adviser to the Haiti Fertility Survey. Survey Director is Mr. J. Vilgrain.

The HFS will use the WFS Core Questionnaire incorporating the modules on Factors other than Contraception Affecting Fertility and Community-level Variables. Creole will be used for the questionnaires. The number of individual interviews is expected to be approximately 4,500, covering all women aged 15-49 in the sample households. Field work is tentatively scheduled for May through August 1977, employing 10 supervisors and 26 female interviewers.

#### **Jamaica**

The national executive agency for the Jamaica Fertility Survey is the Department of Statistics with Ms. C. McFarlane as Survey Director. Field work which had been slightly delayed was successfully completed in January 1976.

The manual editing, coding, punching and verification was carried out by the staff of the Department of Statistics. Considerable input was given by WFS for data processing. WFS installed the edit package CONCOR and a course on its use was given. Machine editing is now under way. Tabulation for Country Report No. 1 will start shortly. The report writing will be done in co-ordination with the WFS Regional Co-ordinator for the Caribbean.

Staff members of the Department attended the Regional Meeting on Data Processing of the Caribbean Surveys, held in Trinidad, September 1976. (See page 22, under Guyana).

#### **Trinidad and Tobago**

A visit was made to Trinidad and Tobago by WFS staff in March 1976 to draw up the

survey design for the Trinidad and Tobago Fertility Survey (T&TFS). A number of agencies and organizations will cooperate with the Central Statistical Office in the implementation of the survey. These included the Ministry of Planning and Development; the Ministry of Health, the University of the West Indies, and St. Augustine's Institute of Social and Economic Research. Overall supervision of the T&TFS will be provided by the Regional Co-ordinator for WFS surveys in the Caribbean.

The survey will cover a sample of all women in the age-group 15-49 years, consisting of approximately 5,500 women in 5,000 households. (Females 15-19 years old attending primary or secondary school full-time are not eligible for interview). Those women who have never lived in a sexual union are interviewed only up to Section 3, 'Union Status and Partners', of the questionnaire.

The T&TFS Questionnaire includes parts of the Abortion and Economic Modules and adaptations of the Family Planning and Fertility Regulation Modules.

Two questionnaires containing different versions of the section on Union Status and Partners and Fertility Regulation Modules (complete and shortened) were pre-tested from 3-17 November 1976. It was decided to maintain essentially the same version as used in Guyana and Jamaica for the Union Status and Partners, and the short Fertility Regulation Module. The time-table of the project is being revised in the light of the changes in the questionnaire and related documents. Field work is now re-scheduled for February-April 1977.

## AFRICA

### Cameroon

Two WFS staff visits were made to Cameroon in 1976. The preliminary visit in March was to inform the local authorities about the WFS. In addition, a provisional survey plan was drawn up during the course of the visit, with the national executive agency, the Direction de la Statistique et de la Comptabilité Nationale. A design visit took place in June, at which time it was decided that a study be made of the strategy to be adopted by the WFS for a Cameroon fertility survey, given the linguistic complexity of the country. Field work is scheduled for 1977-78.

The WFS commissioned Dr. Helen Ware of the Australian National University to undertake a three-month linguistic study. Her report, 'Language Problems in Demographic Field Work in Africa: The Case of the Cameroon Fertility Survey' (WFS/TECH. 477), which will be published in the Scientific Report Series, is summarized on page 51. Dr. Ware reported her findings in London to the WFS staff and Mr.

Nkougourou of the Direction de la Statistique in September 1976 and made recommendations for the survey strategy. The project agreement document was then finalized and was approved in December.

Mr. A. Maitra, ECA sampling adviser based in Addis Ababa, visited Cameroon in October to help in the preparation of the sample design. A linguistic reconnaissance operation is scheduled for early 1977 to determine the languages spoken by women in the selected clusters. For the main survey, an initial sample of approximately 32,000 households will be interviewed using the household schedule. These will be subsampled to yield approximately 10,000 women aged 15-49 for the individual interview. Sampling rates will be doubled in the urban sector and quadrupled in the Eastern Province where special studies of the prevalence of contraceptive use and of the infertility problem, respectively, is envisaged.

The questionnaire will be translated into twelve or thirteen languages including French and English. The Community-level Module, the General Mortality Module and the module on Factors other than Contraception Affecting Fertility will be incorporated into the questionnaires.

The French Government through ORSTOM is funding the services of the WFS Resident Adviser, Mr. Benoit Ferry.

#### **Kenya**

Field work for the Kenya Fertility Survey which is being carried out by the Central Bureau of Statistics with Mr. P. Singh as Survey Director will be organized in 3 consecutive stages of 2½ months each, beginning August 1977. The expected sample size will be 10,000 women. The first pre-test was carried out in June-July 1976 using 3 language versions of the questionnaire: Kikuyu, Luo and Kiswahili. A second pre-test is scheduled for early 1977, using new language versions: Luo, Luhya, Kalenjin, Mijikenda, Meru and Kisii. Questionnaires from the second pre-test will be used to develop and refine coding, editing and machine processing procedures.

The KFS is being funded by the United Kingdom as part of its contribution to the WFS. The module on Factors other than Contraception Affecting Fertility is being implemented in full for the first time in any WFS survey and its testing in successive pre-tests in Kenya is of critical importance to the continuous improvement WFS seeks in its methodology.

Sir Maurice Kendall visited Kenya from 20-23 September and familiarized himself with the operations and personnel of the Central Bureau of Statistics executing the KFS and to review progress of the survey.

**Togo**

A preliminary visit was made to Togo in November 1976 to discuss with Direction de la Statistique the technical aspects and manpower aspects of the survey.

**Tunisia**

Preliminary discussions were held with the Institut National de Statistique, the Centre d'Etudes et de Recherches Economiques et Sociales and the Office Nationale du Planning Familial et de la Population.

**Lesotho**

drawn up with the executive agency, the Department of Statistics. National Director is Mr. A. M. Monyake. Funding was approved in September and the preparatory phase began when a second visit was made in November to draw up the pre-test questionnaire and manuals, and to design and draw the sample.

The main survey field work will take place in two phases, one for the Household Schedule and one for the Individual Questionnaire in April-May and July-September, 1977, respectively. The sample will consist of 20,000 households for the Household Schedule with 5,000 ever-married women aged 15-49 to be sampled for the individual interview. The sampling fraction in urban areas will be doubled to permit rural-urban comparisons during analysis.

The questionnaire will be translated into Sesotho. The modules which will be used are those on General Mortality, Factors other than Contraception Affecting Fertility and Community-level Variables. In addition, questions on the availability of contraceptives will be added to the Core Questionnaire. Height and weight measurements will be taken on a sub-sample of respondents as a part of the module on Factors other than Contraception Affecting Fertility.

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**MIDDLE EAST****Iran**

A survey design visit was made to the Iran Statistical Center, Tehran, in July 1976 led by Sir Maurice Kendall. A work plan and time schedule were drawn up, but no budget was prepared as Iran is financing its fertility survey without external assistance. Survey Director is Mr. N. Maroufi.

Field work is scheduled for April to June 1977 following the National Census operation conducted in October-November 1976. The Census information will facilitate

sampling and mapping operations. The sample will consist of approximately 6,250 households, containing approximately 5,000 ever-married women 15-50 years of age who will be interviewed individually.

Questionnaires will be printed in Persian and include the following modifications or additions:

- 1) Both date of religious marriage and date of consummation of the first marriage will be obtained, as well as age of current or last husband and blood relationship between husband and wife.
- 2) The Community Variables and Fertility Regulation Modules will be included.
- 3) The marriage history will precede the pregnancy history.

A Husband's Survey of about 700 husbands of women with completed interviews will take place around the same period.

All data processing will be carried out by the Statistical Center which has an IBM 370/145. CONCOR, WFS' machine editing package, and CLUSTERS, the sampling package, have been made available to the Statistical Center.

#### **Jordan**

The Jordan Fertility Survey (JFS), being carried out by the Department of Statistics is the first WFS survey in an Arab country. The JFS is progressing well on schedule. Dr. Hanna Rizk, who acted as WFS Resident Adviser for periods in April, May and June 1976 and Dr. Atef Khalifa, UN Expert at the Department of Statistics, Amman, have worked in close liaison with WFS in assisting the Department of Statistics in the implementation of the JFS.

The JFS questionnaire has incorporated the modules on Abortion and Fertility Regulation and some questions from the module Factors other than Contraception Affecting Fertility. An expanded household schedule incorporating the WFS General Mortality Module was also used.

Field work for the household schedule was conducted during May-June, and for the individual questionnaire during June-September 1976. Office editing and coding and key punching proceeded simultaneously with the field work. These operations, as well as machine editing for the household schedule, were finished by December 1976.

All computer programming for editing, variable recoding and tabulation is being done at the Department of Statistics, Amman, without assistance from any outside agency. The Country Report No. 1 is scheduled to be drafted by mid-1977.

#### **Kuwait**

The first WFS survey in the Arabian Gulf Area is self-financing and is being undertaken by the Central Statistical Office, Planning Board. The survey formally started in October 1976 with main field work originally scheduled for 1977. The Household Schedule will incorporate the General Mortality Module and the Individual Questionnaire will include the modules Fertility Regulation and Factors other than Contraception. The modules Fertility Regulation and Factors other than Contraception Affecting Fertility.

The proposed sample will include all ever-married women less than 50 years old. Approximately 4,600 eligible women are expected to be interviewed, both Kuwaitis and non-Kuwaitis. Eight teams, each consisting of 4 female interviewers, 1 female supervisor and 1 male supervisor, were tentatively scheduled to commence main field work in February 1977. Two members from the WFS Professional staff visited Kuwait in October to assist the Central Statistics Office with the sampling frame and work-plan. However, as of early November the Central Statistical Office decided to postpone the survey for a year. Field work may now take place some time in 1978.

#### **Syria**

The National Executive Agency for the Syria Fertility Survey is the Central Bureau of Statistics. A survey design visit was made in October 1975 during which a survey proposal and time-table were drawn up. After consideration by UNFPA it was decided to schedule the project for 1977. A WFS staff member is going to Damascus in February 1977 for further discussions with government officials.

#### **Turkey**

A WFS survey design visit was made to Turkey in February 1976 to discuss and draw up a plan for the Turkish Fertility Survey (TFS). However, the proposed executive agency - the State Institute of Statistics, Ankara - later found itself unable to conduct the survey, and, consequently, a second WFS design visit was made in August 1976. The TFS is to be conducted by the Institute of Population Studies at Hacettepe University, Ankara with Mr. U. Sunday as Survey Director. The State Institute of Statistics will collaborate by providing the sample frame for the TFS, which will be a sub-sample of its Turkish Demographic Survey (TDS) being currently planned. In addition, the TDS will provide the household schedule tabulations similar to those proposed by the WFS. The TDS will consist of a multi-round survey covering about 20,000 households; the TFS will consist of interviewing 6,000 ever-married women aged 15-49.

The questionnaire is scheduled to be pre-tested during mid-1977, and the field work is tentatively scheduled for 1978.

#### 2.1.2 ASSOCIATE STATUS

Fertility surveys in some countries are considered to have an 'associate status' with reference to WFS participation since they fulfil certain WFS requirements, or utilize some of the WFS basic documentation. Financial assistance, if any is required, is not provided through the WFS. The surveys in the following countries fall into this category: Egypt, Hong Kong, Martinique and Guadeloupe, and Mauritius.

##### **Egypt**

The Central Agency for Public Mobilization and Statistics undertook a national fertility survey in two rounds, September 1974-September 1975. The Director has requested WFS documentation on data processing and the Guidelines for Country Report No. 1. Analysis is believed to be in progress. Interest has also been expressed in carrying out a full-scale WFS survey, negotiations of which are expected to take place in 1977.

##### **Hong Kong**

A staff member visited Hong Kong from August 31 to September 2 1976 to make contact with the staff of the Census and Statistics Department of the Government of Hong Kong. The Census and Statistics Department carried out a By-Census in 1976 which contained fertility questions and offered to prepare from the data available certain tabulations along the lines of the WFS document, Guidelines for Country Report No. 1. The Department has requested all WFS documentation on special computer programs for analysis together with some technical assistance in the report writing. The data should be available to WFS on tape in January-February 1977.

##### **Martinique and Guadeloupe**

The Government of France carried out demographic surveys in Martinique and Guadeloupe operating through the Institut National d'Etudes Démographiques (INED), in collaboration with ORSTOM and INSEE. Field work in Guadeloupe ended in January and in Martinique in April 1976. The questionnaire contains two innovative features: firstly, in the 'union-partner' history, initials are used to identify, and later refer to, each partner. In the live birth table, for each live birth the initials of the father of the child are recorded. Secondly, the live birth table contains a column

for recording whether the pregnancy was desired or not. All data processing is being conducted by INED in Paris under the close supervision of Dr. Yves Charbit, responsible for the survey. By the end of 1976 the data were being edited. INED will produce some tables and write a report the draft of which is due in June-July 1977. A WFS staff member visited INED in early November and had discussions with Dr. Y. Charbit on the writing of this report.

#### **Mauritius**

The University of Mauritius undertook a fertility survey in August 1975. Other cooperating agencies included the Ministry of Economic Planning and Development, the Central Statistical Office and the Ministry of Health. The interviewers covered 2,000 ever-married women below the age of 50 as well as 1,000 ever-married men, not necessarily husbands of the selected women.

The questionnaire had been designed on the basis of the WFS Core Questionnaire. WFS also sent the executive agency a copy of the WFS document on tabulations, Guidelines for Country Report No. 1. A report on the survey is expected shortly.

### **2.1.3. CLASSIFICATION BY YEAR OF APPROVAL**

#### **A. Approved prior to 1976**

Bangladesh	Indonesia	Nepal
Dominican Republic	Jamaica	Panama
Fiji	Korea, Republic of	Pakistan
Guyana	Malaysia	Sri Lanka
Thailand		
Total: 13		

#### **B. Approved during 1976**

Cameroon	Jordan	Mexico
Colombia	Kenya	Philippines
Costa Rica	Kuwait	Trinidad & Tobago
Haiti	Lesotho	Venezuela
Iran		
Total: 13		

**C. Planned for possible approval 1977**

Burma	Guatemala	Syria
Chile	Peru	Tunisia
Ecuador	Senegal	Turkey
Ghana	Sudan	Yemen P.D.R.
Total: 12		

**D. Interested or possible for approval 1978**

Brazil	Malagasy	Paraguay
Congo	Mauritius	Sierra Leone
Egypt	Morocco	Yemen A.R.
Iraq	Nigeria	Zambia
India		
Total: 13		

**Table I: PRESENT AND PROJECTED PARTICIPATION OF DEVELOPING COUNTRIES IN WFS PROGRAMME (31 DECEMBER 1976)**

Country	National Director/ Survey Director	National Executive Agency(ies)	WFS Staff Co-ordinator	Pop. (mil.)*	Languages used in the Questionnaire
<b>Asia &amp; Oceania</b>					
Bangladesh	A. R. Khan and N. Ali	Ministry of Health and Population Planning	M. Ahmad	73.7	Bengali English
Burma†	—	—	not allocated	29.8	—
Fiji	M. A. Sahib	Bureau of Statistics	J. Cleland	0.6	Fijian, Hindi, English
Hong Kong (Associate Status)	—	Census and Statistics Department	—	4.4	—
Indonesia	S. Suharto	Central Bureau of Statistics	A. MacDonald	136.0	Bahasa
Korea, Rep. of	W. S. Rhee and E. H. Chog	Bureau of Statistics & Korean Institute for Family Planning	M. Pasaba	33.9	Korean
Malaysia	R. Chander S. Rahman (Co-Dir.) V. T. Palan (SD)	Department of Statistics National Family Planning Board	V. Chidambaram	12.1	Malay } Official English } Chinese } Tamil } Unofficial
Nepal	B. R. Pande (ND) J. Tuladhar (SD)	Nepal Family Planning/ Mother & Child Health Project in the Ministry of Health	J. Cleland	12.6	Nepali Bhajipur Mathal
Pakistan	Nizamuddin	Training Research & Evaluation Center of the Population Council of Pakistan	A. MacDonald	70.6	Urdu, Pushto, Punjabi, Sindhi, Baluchi

(Note: Countries followed by † are those planned for inclusion in the WFS.)

\* Source: Population-1975 World Population Data Sheet of the Population Reference Bureau Inc.

Modules	Sample size (Individual Interview)	Date of Survey Design Visit	Commencement of Field Work	Stage of Survey as of 31 December 1976
Abortion, Community-Level & Factors other than Contraception Affecting Fertility	6,500	March, 1975	December, 1975	Preparation of Country Report No. 1. Draft expected in February 1977
—	—	—	1977	Preliminary visits in June and July 1976
Not applicable but some module type questionnaires were included	5,000	July, 1973	February, 1974	Country Report No. 1 finalized and at printers, for release January 1977.
—	—	—	1976	Data available on tape in January/February 1977.
Abortion, Family Planning, Fertility Regulation	10,000	June, 1975	March, 1976	Tabulations for Country Report No. 1 being run.
Abortion, Community-Level, Economic, Family Planning, Fertility Regulation,	5,300	February, 1974	September, 1974	Draft of Country Report No. 1 being finalized.
Abortion, Community-Level, Family Planning, Fertility Regulation, Economic	7,600	April, 1974	August, 1974	Country Report No. 1 being finalized. Publication in January 1977.
Abortion, Family Planning, (Factors other than) Fertility Regulation	6,000	September, 1975	April, 1976	Tabulations for Country Report No. 1 being run.
Abortion, Fertility Regulation, Family Planning	4,949	May, 1974	May, 1975	Country Report published in November 1976

Country	National Director/ Survey Director	National Executive Agency(ies)	WFS Staff Co-ordinator	Pop. (mil.)*	Languages used in the Questionnaire
Philippines	T. Mijares and M. Concepcion Co-Dirs.)	National Census and Statistical Office	A. MacDonald	44.4	English, Tagalog, Cebuano, Iloca Hiligaynon, Bico
Sri Lanka	S. A. Meegama D. Fernando	Ministry of Planning & Economic Affairs & Department of Census and Statistics	T. Pullum	14.0	Sinhalese, Tamil English
Thailand	Ahuri Wanglee & Vikid Prachuabmoh (Co-dirs.)	National Economic & Social Development Board, National Statistical Office and Institute of Population Studies	V. Verma	42.1	Thai
<b>Latin America</b>					
Chile	D. S. Chaparro Ruiz and O. Tacla		G. Rodriguez	10.8	Spanish
Colombia	E. Prada	Corporación Centro Regional de Población	M. Vaessen	25.9	Spanish
Costa Rica	V. R. de Ortega & E. Cordero (Co-Dirs.)	Dirección General de Estadística y Censos	A. Marckwardt	2.0	Spanish
Dominican Republic	N. Ramirez	Consejo Nacional de Población y Familie	M. Vaessen	5.1	Spanish
Ecuador	—	—	M. Vaessen	—	—
Guatemala†	C. Herrera	Dirección General de Estadística	G. Rodriguez	4.1	Spanish About 4 other m. Indian languages be decided after sample selection
Mexico	C. Welty	Dirección General de Estadística	M. Vaessen	59.2	Spanish
Panama	F. Mascarin	Oficina de Estudios de Población	A. Marckwardt	1.7	Spanish

Modules	Sample Size (Individual Interview)	Date of Survey Design Visit	Commencement of Field Work	Stage of Survey as of 31 December 1976
Abortion, Community-level, Factors other than, Fertility Regulation	15,000	September, 1976	January, 1978	Project to begin in March 1977.
Abortion Family Planning, Fertility Regulation	8,000	January, 1975	August, 1975	Country Report No. 1 being written.
Community-Level Fertility Regulation, Economic (in husbands' survey)	4,000 (plus 3,500 husbands of currently married women)	June, 1974	March, 1975	Country Report No. 1 being finalized.
Abortion, Fertility Regulation, Factors other than	5,500	October, 1976	September, 1977	Project to start in April 1977.
Abortion, Family Planning, Fertility Regulation	5,391	May, 1975	May, 1976	Tabulations being run.
Abortion, Family Planning, Fertility Regulation	4,000	September, 1975	July, 1976	Cleaning of data to start in January 1977.
Family Planning, Fertility Regulation	3,200	August, 1974	April, 1975	Country Report published in November 1976.
			1977-78	Preliminary visit in January 1977. Survey unlikely in immediate future.
	4,000	October, 1975	1978	Survey postponed due to 1976 earthquake.
Abortion, Family Planning, Community-level.	7,250	June, 1975	July, 1976	Field work completed in December
Abortion, Family Planning, Fertility Regulation	3,702	October, 1974	December, 1975	Country Report No. 1 due in early 1977.

Country	National Director/ Survey Director	National Executive Agency(ies)	WFS Staff & Co-ordinator	Pop. (mil.)*	Languages used in the Questionnaire
Peru	W. Caballero and V. De Villacorta	Instituto de Estadística	A. Marckwardt	15.3	Spanish Ansash Quechua Ayacucho Guech Cuzco Quechua Aymara
Venezuela	J. Paez Celiz	Bureau of Statistics	M. Vaessen	12.2	
<b>Caribbean</b>					
Guyana	P. Chase	Bureau of Statistics	D. Bogale, J. Hare- wood (Regional Co-ordinator)	0.8	(Caribbean versio of WFS Core Questionnaire) English
Haiti	J. Vilgrain and D. Moise	Institut Haitien de Statistique	C. Scott, J. Allman (Resident Adviser)	4.6	Creole
Jamaica	C. McFarlane	Department of Statistics	D. Bogale (J. Hare- wood: Regional Co-ordinator)	2.0	(Caribbean versio of WFS Core Questionnaire) English
Martinique & Guadeloupe (Associat Status)	Charbit (Resi- dent Adviser)	Institut National de la Statistique et des Etudes Economiques	A. MacDonald	0.7	French Creole
Trinidad and Tobago	P. Pujadas and Hewitt.	Central Statistical Office	D. Bogale, J. Hare- wood (Regional Co- ordinator)	1.0	(Caribbean Versio of WFS Question- naire) English
<b>Africa</b>					
Cameroon	—	N. Ngae and A. Nkougoucou	Directorate of Statistics	6.1	12 (see Section 2.1, p. 24 of Report)
Ghana†	—	Field work to be conducted by Census Office	L. Williams	9.9	—
Kenya	P. Singh	Central Bureau of Statistics	J. Cleland	13.3	9 (See Section 2.1 page 25)

Modules	Sample Size (Individual Interview)	Date of Survey Design Visit	Commencement of Field Work	Stage of Survey as of 31 December 1976
Community-level, Economic, Factors other than, Fertility Regulation	7,000	August, 1976	July, 1977	Project to start in early 1977.
—	—	—	1977	
None	4,858	October, 1974	May, 1975	Tabulations for Country Report No. 1 being run.
Community-level, Factors other than Contraception	4,500	March, 1975	May, 1977	Preliminary work started.
Economic	5,500	October, 1974	November, 1975	Machine editing underway.
None	Guadeloupe 1,400 Martinique 1,400	—	Guadeloupe Oct., 1975 Martinique Jan., 1976	Consistency checks underway.
Fertility Regulation	5,500	October, 1974	November, 1975	Finalization of documents following pre-test.
Community-level, Factors other than	10,000	(Preliminary) June, 1976	September, 1977	Project to start in 1977.
—	—	Planned for August, 1977	1978	
Factors other than Community-level	10,000	August, 1975	August, 1977	Preparatory work for second pre-test in March 1977

37

Country	National Director/ Survey Director	National Executive Agency(ies)	WFS Staff Co-ordinator	Pop. (mil.)*	Languages used in the Questionnaire
Lesotho	A. M. Monyake and A. M. Mpti	Bureau of Statistics	L. Williams	1.1	Sesotho
Malagasy,† Republic of	—	—	—	7.5	—
Mauritius (Associate Status)	—	University of Mauritius	—	0.9	—
Senegal†	—	—	—	4.4	—
Sudan†	—	—	M. Khalil	18.3	—
Togo†	—	—	H. Jemai	2.2	—
Tunisia†	—	Institut National de la Statistique	H. Jemai	5.9	—
<b>Middle East</b>					
Egypt (Associate Status)	A. L. Farag	Central Agency for Public Mobilization and Statistics	—	37.5	Arabic
Jordan	S. El Asad	Department of Statistics	M. Khalil (1976) V. Verma (1977)	2.7	Arabic
Kuwait†	F. M. Hussein	Central Statistical Office	M. Khalil	1.1	Arabic
Syria†	A. Radjai	Central Bureau of Statistics and Centre for Population Surveys and Research	M. Khalil	7.3	—
Iran	N. Maroufi	Iran Statistical Centre	M. Vaessen	32.9	Persian

Modules	Sample Size (Individual Interview)	Date of Survey Design Visit	Commencement of Field Work	Stage of Survey as of 31 December 1976
Community-level, Factors other than, General Mortality, Questions on Availability of Contraception	5,000	January, 1976	July, 1977	Design of sample. Preparatory work for first pre-test in February 1977.
—	—	—	1977-78	
None	2,000 (plus 1,000 ever married men)	—	August, 1975	
—	—	—	1977-78	Intends to participate. Documentation supplied. Planning visit postponed until funding possibilities cleared up.
—	—	January, 1977	1977	Survey design visit in January 1977. Fieldwork planned for late 1977.
—	—	—	1977	Project Request made.
—	—	—	1978	Preliminary visit scheduled for November 1977.
None	12,600	—	November, 1975	Report expected shortly.
Abortion, Community Variables, General Mortality, Factors other than, Fertility Regulation.	3,868	October, 1975	July, 1976	Machine editing under- way
Fertility Regulation, Factors other than . . .	4,587	November, 1975	1978	Survey postponed until 1978 by CSO.
Community-level Mortality, Factors other than . . .	4,350	October, 1975	1977	Delayed due to other commitments of CBS.
Community-level, Fertility Regulation	5,000	July, 1976	April, 1977	Preparatory work in progress.

Country	National Director/ Survey Director	National Executive Agency(ies)	WFS Staff Co-ordinator	Pop. (mil.)*	Languages used in the Questionnaire
Iraq†	—	—	—	11.1	—
Turkey	U. Sunday	Institute of Population Studies, Hacettepe University	Y. Yaser and V. Verma	39.9	Turkish
Yemen A.R.†				6.9	
Yemen D.R.†				1.7	

Modules	Sample Size (Individual Interview)	Date of Survey Design Visit	Commencement of Field Work	Stage of Survey as of 31 December 1976
—	—	—	1977	
Not yet decided	6,000	February and August 1976	1978	Project submitted for approval to UNFPA
—	—	—	—	Preliminary visit scheduled for January 1977
—	—	—	—	Preliminary visit scheduled for January 1977.

## 2.2 THE DEVELOPED COUNTRIES

The WFS programme in the developed, or low-fertility, countries is being carried out in close collaboration with the Economic Commission for Europe, Geneva. Twenty-one countries have announced their participation in the programme, of which 7 have completed their field work. Available details are summarized in the attached table.

A meeting of the UN Working Group on Social Demography was convened by the Division of Social Affairs at Geneva in cooperation with the Secretariat of the Economic Commission for Europe and the ISI. This meeting was held in Warsaw at the invitation of the Polish Government from 25-28 May 1976. The majority of participating countries indicated that they were following the objectives of the Core Questionnaire for low-fertility countries prepared by the WFS; and there appeared to be no major problems in ensuring the availability of comparable data on a majority of variables for the proposed comparative analysis. This meeting discussed in great detail the document prepared by ECE, 'Working Outline and Basic Tabulation Plan' for the comparative study, which mainly followed the lines of the basic document 'Guidelines for the Country Report for Low-Fertility Countries' (WFS/TECH. 237) prepared by the WFS professional staff. In addition, the national agencies were requested to supply WFS and ECE with copies of original questionnaires, coding manuals, and all other related documents including information on sample design, cost, and manpower. For this purpose WFS had prepared and circulated a detailed check-list of items on which information is needed, in the form of a document entitled 'Reporting to WFS Organization of Technical Data on Developed Country Surveys', (WFS/TECH. 387).

**Table II: PRESENT AND FUTURE PARTICIPATION OF DEVELOPED COUNTRIES IN THE WFS PROGRAMME**

Country	Sample Size	Executive Agency	Status as of 31 December 1976
Belgium (Flemish part only)	5,500	Population and Family Study Centre, Dept. of Public Health & the Family, Brussels.	Field work completed, processing in progress.
Bulgaria	6,000	Scientific Research Institute of Statistics, Sofia.	Field work started in October 1976.
Canada	Not defined	Family Planning Division, Health & Welfare, Toronto.	Canadian National Fertility Survey committee has prepared a detailed project. Survey postponed, probably to 1978.
Czechoslovakia	8,000	Federal Statistical Office, Prague.	Field work February 1977.
Denmark	6,000	Danish National Institute of Social Research, Copenhagen.	Field work completed in May 1975; analysis in progress.
Finland	5,000	Population Research Institute, Helsinki.	Pre-test September 1976; field work possible early 1977.
France	Not Defined	Institut National d'Etudes Démographiques, Paris.	Field work planned 1977.
Hungary	4,800	Hungarian Central Statistical Office, Budapest.	Own survey along lines of WFS; field work planned for March-April 1977; A pilot survey was done in October 1976.
Japan	2,344	Dept. of Statistics & Information, Ministry of Health & Welfare, Tokyo.	A selected set of tables and preliminary analysis available in Japanese; being translated into English.
Netherlands (10 marriage cohorts only)	4,522	Netherlands Interuniversity Demographic Institute, Voorburg.	A first report in Dutch with table headings in English has already been published.
New Zealand	2,081	Management Services & Research Unit, Department of Health.	Report made available to WFS in May 1977.

# PARTICIPATION OF DEVELOPED COUNTRIES IN THE WFS PROGRAMME

## Executive Agency

Status as of 31 December 1976

Population and Family Study Centre,  
Dept. of Public Health & the Family,  
Brussels.

Field work completed, processing in progress.

Scientific Research Institute of Statistics,  
Sofia.

Field work started in October 1976.

Family Planning Division, Health &  
Welfare, Toronto.

Canadian National Fertility Survey consor-  
tium has prepared a detailed project plan.  
Survey postponed, probably to 1978.

Federal Statistical Office, Prague.

Field work February 1977.

Danish National Institute of Social  
Research, Copenhagen.

Field work completed in May 1975; analysis in  
progress.

Population Research Institute, Helsinki.

Pre-test September 1976; field work possibly in  
early 1977.

Institut National d'Etudes Démographiques,  
Paris.

Field work planned 1977.

Hungarian Central Statistical Office,  
Budapest.

Own survey along lines of WFS; field work  
planned for March-April 1977; A pilot survey  
was done in October 1976.

Dept. of Statistics & Information,  
Ministry of Health & Welfare, Tokyo.

A selected set of tables and preliminary report  
available in Japanese; being translated into  
English.

Netherlands Interuniversity Demographic  
Institute, Voorburg.

First report in Dutch with table headings in  
English has already been published.

Management Services & Research Unit,  
Department of Health.

Report made available to WFS in May 1976.

Table II: PRESENT AND FUTURE PARTICIPATION OF DEVELOPED COUNTRIES IN THE WFS PROGRAMME

(continues)

Country	Sample Size	Executive Agency	Status as of 31 December 1976
Norway	5,000	Central Bureau of Statistics, Oslo.	Pre-test planned November 1976; main work May 1977.
Poland	10,000	Central Statistical Office, Warsaw.	Planned pre-test 1977 and field work September-November 1977.
Romania	10,000	Population Commission of Romania, Bucharest.	Field work possibly late 1977.
Spain	5,000+	National Institute of Statistics, Madrid.	Field work in early 1977.
U.K.	6,000	Office of Population Censuses & Surveys, London.	Coding and editing of data in progress.
U.S.A.	10,000	National Center for Health Statistics, Washington.	Cleaning of data underway; Tabulation expected by June 1977.
Yugoslavia	7,500	Federal Institute of Statistics, Belgrade	Field work, September 1976.

Other possible participants:

- 1. Greece
  - 2. Italy
  - 3. Israel:
- } Details not yet known

A nationwide survey was carried out in 1973-1974 with a sample of about 13,000 ever-married women aged below 60 years. To the possible, comparative tables will be produced by the Central Bureau of Statistics, Jerusalem.

**PARTICIPATION OF DEVELOPED COUNTRIES IN THE WFS PROGRAMME** *(continued)*

Size	Executive Agency	Status as of 31 December 1976
	Central Bureau of Statistics, Oslo.	Pre-test planned November 1976; main field work May 1977.
	Central Statistical Office, Warsaw.	Planned pre-test 1977 and field work September-November 1977.
	Population Commission of Romania, Bucharest.	Field work possibly late 1977.
	National Institute of Statistics, Madrid.	Field work in early 1977.
	Office of Population Censuses & Surveys, London.	Coding and editing of data in progress.
	National Center for Health Statistics, Washington.	Cleaning of data underway; Tabulation expected by June 1977.
	Federal Institute of Statistics, Belgrade	Field work, September 1976.

1 out in 1973-1974 with a sample of about 13,000 ever-married women aged below 60 years. To the extent  
 ll be produced by the Central Bureau of Statistics, Jerusalem.

## 3 Programme Developments

### 3.1 WFS DOCUMENTATION

#### 3.1.1 MODIFICATIONS TO THE CORE QUESTIONNAIRE

During 1976 the WFS continued its review of the basic instruments of the survey, the WFS Core Questionnaire and the modules. Over two years' experience with the Core Individual Questionnaire has indicated the desirability of incorporating certain modifications to this document. Most of these have, in fact, already been introduced into many of the country questionnaires on the advice of WFS professional staff. Not all of the modifications are mandatory, some are simply suggestions or an alternative format of the same material.

Following are some of the changes which have been adopted:

- Respondent's age to be obtained irrespective of whether the date of birth is given.
- Husband's age to be obtained.
- A new version of Section 2, the Maternity History, has been prepared in order to improve the rapport between interviewer and respondent.
- An alternative format to the birth history has been drawn up.
- Simplification of the descriptions of contraceptive methods.
- Questions on name of outlet where method available, time required to reach that outlet and cost of method at that outlet are added to Section 3 on Contraceptive Knowledge and Use, as recommended by the Technical Advisory Committee in its 7th meeting in August 1976.

#### 3.1.2 MODULES

For those modules which were finalized, the WFS staff began in 1976 to work on the tabulation plans. These were produced for the Abortion Module, General Mortality Module, Family Planning Module and the module on Factors other than Contraception Affecting Fertility. Development began on a prototype analysis for the Community-level Module, using the Malaysian data (see page 15 for further details). Table I on page 32 indicates in which countries the various modules have been used to date. Additional information on certain modules is summarized here.

### **Abortion Module**

The tabulation plan for the Abortion Module is now available. However, the type and detail of the tables that can be derived from the information contained in this module will depend largely on the magnitude of the level of abortion prevalent in the population under study. Of the first eighteen countries participating in the WFS, twelve have used the Abortion Module either in full or in part.

### **Module on Factors other than Contraception Affecting Fertility**

Early in the year, the report of the Ghana pilot survey of this module was submitted by S. K. Gaisie and Ben Gyepi-Garbrah of the Regional Institute for Population Studies, Legon, Ghana. The module along with the WFS Core Questionnaire was tested during the course of the pilot. Both male and female interviewers were used to study the feasibility of eliciting sensitive information from female respondents. Women in Ghana did not object to the personal nature of the questions and showed a slight preference for female interviewers.

The module on Factors other than Contraception Affecting Fertility underwent further development and improvement during the year. The module can now be incorporated into Section 5 of the WFS Core Questionnaire with the addition of questions on contraceptive use during the last closed pregnancy interval taken from the Fertility Regulation Module. The module on Factors other than Contraception Affecting Fertility now replaces and includes Section 5 and, thus, can be easily adapted for the particular country survey.

The present module deals with the duration of lactation, post-partum amenorrhoea, post-partum abstinence, and temporary absences of the partners with reference to the open and last closed pregnancy intervals.

The module also deals with other optional variables including coital frequency, terminal abstinence, age of menarche, age of menopause, and regularity of menses. In addition, the module includes the optional measurement of weight and height of respondents in order to obtain an index of nutritional level.

The current version of the module was tested during the first pre-test for the Kenya Fertility Survey in August 1976. The pre-test questionnaire was translated into three languages and four hundred interviews were completed. The current version of the module is now being adopted in the Kenya, Lesotho and Cameroon fertility surveys. The draft of the tabulation guidelines for the module has been prepared and circulated and is now under final revision.

## **Nutrition**

Liaison was established between the WFS and WHO in the preparation of a nutrition module. Individuals at WHO were most helpful in giving advice in the selection of variables to be measured. The module consists of a selected list of anthropometric measurements which can contribute to a nutritional assessment of adult women. The module exists as an optional supplement to the module on Factors other than Contraception Affecting Fertility. Any country wishing to include nutritional measures can do so in consultation with WFS staff and WHO experts resident in the country.

### **3.1.3 CORE QUESTIONNAIRE FOR HUSBANDS**

A Core Questionnaire for Husbands has been produced by WFS staff for use in conjunction with the wife's questionnaire. Independent information from the husband is important from two points of view:

- 1) It will provide information from husbands with respect to contraceptive knowledge, use, and fertility intentions.
- 2) It will permit a comparison with the information reported by the wife on the same topics and thus give some idea about the implementation problems of fertility intentions and contraceptive use.

It is recommended that the sample of husbands be selected from among the husbands of currently married women who have been married only once. However, where more frequent marital or consensual relationships are common the sample may have to refer to current husband, irrespective of whether husband or wife has been married more than once. The husband's survey may follow the wife's survey by some 3 weeks, to allow for appropriate sample selection.

The questionnaire contains 4 sections as described below:

Section 1: Husband's Background. This is a repetition of the questions asked about the husband in Section 6 of the Core Questionnaire for Women.

Section 2: Marriage and Fertility. Date of marriage, total number of children born alive, date of birth of the last child, current pregnancy of wife and preference for a boy or girl.

Section 3: Contraceptive Knowledge and Use. The entire section of the Core Questionnaire is repeated for the husband.

Section 4: Fertility Regulation. This is an abridged version of the Fertility Regulation Section, combined with some additional and new questions on the husband's perception of his wife's fertility intentions.

#### 3.1.4 SUMMARY OF STATUS OF WFS DOCUMENTATION

Significant progress has been made in the development and translation of WFS documentation. The latest versions of most documents are now available in English, French, Spanish and Arabic.

The following table indicates the current status of WFS documentation. Once the basic documents have been finalized, the WFS publishes them for distribution to those people and institutions on its mailing lists. For a list of these publications, see Appendix III.

DOCUMENT	LAN- * GUAGE	STATUS	WORKING VERSION PRINTED	WFS TECH. NO.
Survey Organization Manual	E	Final Available	Available	134
	F	Final Available	Available	202
	S	Final Available	Available	394
	A	Final Available	Available	332
Manual on Sample Design	E	Final Available	Available	126
	F	Final Available	Available	410
	S	Translation ready to be checked and edited	Planned	
	A	Sent for translation	Planned	
Training Manual	E	Final Available	Available	259
	F	Final Available	Planned	411
	S	Being typed	Planned	
	A	Sent for translation	Planned	450
Supervisors' Instructions	E	Final Available	Available	132
	F	Final Available	Available	204
	S	Final Available	Available	281
	A	Being printed	Planned	516
Interviewers' Instructions	E	Final Available	Available	136
	F	Final Available	Available	412
	S	Final Available	Available	393
	A	Final Available	Available	515

\* English/French/Spanish/Arabic

DOCUMENT	LAN- * GUAGE	STATUS	WORKING VERSION PRINTED	WFS TECH. NO.
Editing and Coding Manual	E	Final Available	Available	250
	F	Final Available	Available	
	S	Translation ready for editing	Planned	
	A	Sent for translation	Planned	451
Core Questionnaire for Developing Countries	E	Final Available	Available	120
	F	Final Available	Available	120A
	S	Final Available	Available	120B
	A	Final Available	Available	337
Core Questionnaire for Developed Countries	E	Final Available	Available	138
	F	Typed by ECE	Not planned	
	Russian	Translated by ECE	Not Planned	
Statement on Questionnaire Modules	E	Final Available	Available	279
	F	Final Available with Core Questionnaire	Available	133/120
	S	Final Available	Available	280
	A	Final Available with Core Questionnaire	Available	337
Abortion Module	E	Final Available	Available	127
	F	Final Available	Available	346
	S	Final Available	Available	395
	A	Scheduled for translation	Planned	
Tabulation Plan (Abortion Module)	E	Scheduled to be done	Planned	
Module on Factors other than Contraception Affecting Fertility	E	Being printed	Planned	
	F	Scheduled for translation	Planned	
	S	Scheduled for translation	Planned	
	A	Scheduled for translation	Planned	
Tabulation plan	E	First draft available	Planned	
Family Planning Module	E	Being revised	Planned	
	F	Scheduled for translation	Planned	
	S	Scheduled for translation	Planned	
	A	Scheduled for translation	Planned	

DOCUMENT	LAN- GUAGE	STAT	WORKING VERSION PRINTED	WFS TECH. NO.
Tabulation plan	E	Provisional draft available	Planned	223
General Mortality Module	E	Final available	Available	195
	F	Wait until requested	Planned if requested	
	S	Wait until requested	Planned if requested	
	A	Wait until requested	Planned if requested	
Tabulation plan	E	Draft Available	Planned	407
Guidelines for the Country Report No. 1 (developing countries)	E	Final available	Available	225
	F	Being typed	Planned	
	S	Translation ready for checking and editing	Planned	
	A	Scheduled for translation	Planned	
Guidelines for the Country Report No. 1 (developed countries)	E	First draft available	Available	237
	F	First draft available	Available	237
	S	Not planned	Not planned	
	A	Not planned	Not planned	
	Russian	Done by ECE	—	
Guidelines on Data Processing	E	Draft available	Planned	430
	F	Scheduled for translation	Planned	
	S	Scheduled for translation	Planned	
	A	Scheduled for translation	Planned	
Strategies for the Analysis of WFS Data	E	Draft available	Planned	431
	F	Scheduled for translation	Planned	
	S	Scheduled for translation	Planned	
	A	Scheduled for translation	Planned	

The following modules are available in the Occasional Paper Series:  
 Community-Level Variables (Nos. 8 and 9)  
 Economic Variables (Nos. 11 and 12)  
 A paper on Modernism appears as Occasional Paper No. 14.

## 3.2 SPECIAL FIELD STUDIES

To obtain technical data to supplement the surveys and refine the methodology, the WFS has also conducted a number of special studies: a linguistic study in Cameroon, a study of some proposed questionnaire items on availability of contraception in the home and the community, and post-enumeration surveys in Bangladesh, Fiji, Indonesia and Pakistan. These studies are described below.

### 3.2.1 LINGUISTIC STUDY IN CAMEROON

Dr. Helen Ware of the Australian National University was commissioned by the WFS to undertake a two-month investigation of the linguistic situation in Cameroon in preparation for the participation of Cameroon in the WFS. The purpose of the investigation was two-fold: 1) to assess the linguistic situation, and 2) to make recommendations for a WFS strategy given this linguistic situation.

#### **Background**

The linguistic situation in Cameroon is complex for several reasons. First, according to some authorities, there are approximately 150 mutually unintelligible languages in Cameroon, a fact which renders the usual WFS practice of translating the questionnaire untenable. Added to the absolute magnitude of the problem is the fact that no complete compendium of the languages exists and the proportion and distribution of people speaking each language is generally not known with any reliability. Third, orthographies do not exist for many of the languages, and fourth, although many people in the country are bi- and tri-lingual, the proportion of people speaking more than one language is unknown.

A tentative proposal for a project design had been drawn up by WFS staff and representatives of the Cameroon Direction de la Statistique before Dr. Ware initiated her study. The sample would be clustered so as to minimize linguistic diversity. An initial field operation would be carried out after sample selection in order to determine which languages are spoken in the selected areas as well as to fix boundaries, and so on. The household schedule and individual questionnaire would be administered during the main field work: 32,000 households would be interviewed first, followed by the interview of 10,000 eligible respondents selected from the households.

Dr. Ware's recommendations are contained in a special report (WFS/TECH. 477) and her recommendations have been incorporated into the design of the WFS in Cameroon. A summary of her findings and recommendations follows.

### **Recommended Strategy**

#### **1) Total number of translations necessary**

It should be possible to interview 92 per cent of the women in the sample if the questionnaire is translated into 10-11 languages in addition to French and English. Seven of the languages (excluding French and English) to be included in the survey have been determined during the course of the investigative study; the remaining three to four will be determined after the drawing of the sample and completing the linguistic reconnaissance.

(i) Translation of the questionnaires into seven languages (including French and English) should ensure that 72 per cent of the women in the sample can be interviewed. These languages are Pidgin, Fulfulde, Ewondo, Bamileke, Bassa, Gbaya (or Baya) and Douala.

(ii) A linguistic reconnaissance operation initiated after the clustered sample is drawn will determine the additional three (to a maximum of four) languages to be used for the survey. Translation of the additional three languages will bring in an additional 20 per cent of the women in the sample.

(iii) The remaining 8 per cent of the women may be interviewed with the aid of interpreters recruited locally.

This strategy is thought to represent an optimal solution in terms of cost reduction and manpower requirements, given the linguistic complexity of Cameroon and the guidelines for a WFS survey. Only 8 per cent of the women will be interviewed with the aid of an interpreter; in all previous surveys in Cameroon all interviews were freely translated during the interview. In addition, WFS standards in terms of samples representative of 100 per cent of the study population can be realized.

#### **2) Necessary personnel**

An expert with some background in both sociology and linguistic problems should be hired full time to monitor the translation, back-translation, and testing of the translated questionnaires. He/she should work closely with the linguists involved in the Atlas Linguistique du Cameroun project. In addition, it will be necessary to employ a co-ordinator/supervisor and two translators, one for back translation, plus one or two interviewers for each translation. The co-ordinator/supervisor should be familiar with the language and should be able to lead discussions with the translators before and after pre-testing and should be able to monitor the field testing.

### 3) *Training*

Interviewer training for the main survey should be scheduled for one month in order to devote the additional time necessary for interviewer practice with the translated questionnaires.

Since some of the languages do not have an accepted orthography, interviewers will have to be taught to read the questionnaire as well. Based on experience during the pilot study, an interviewer can learn to read the questionnaire after hearing a recording of it in the language and reading it over several times.

### 4) *Data processing*

Since most of the questions in the questionnaire are precoded, no problems with data processing are envisaged. The few open-ended questions can be recorded in English or French. The questions themselves will be translated; instructions to interviewers will remain in English or French. Care must be exercised in printing so that each question is placed in exactly the same place on each version of the questionnaire.

#### 3.2.2 PILOT STUDY ON AVAILABILITY OF FERTILITY REGULATION METHODS

For some time consideration has been given to the question of possible revision of WFS instruments to include questions on abortion and on household and community availability of fertility regulation methods. During 1975 changes were made in the Family Planning Module and the Community-level Module, and the Abortion Module was given higher priority, in order to accommodate these requirements. It was then argued, however, that these modifications would be more widely used if they became part of the Core Questionnaire.

At the seventh meeting of the Programme Steering Committee (PSC) in April 1976 a precise proposal to modify the Core Questionnaire in this sense was considered. The proposal consisted essentially of four modifications which may be summarized as follows: 1) add 'pregnancy termination' to the list of fertility regulation methods in Section 3 of the Core, dealing with Contraceptive Knowledge and Use; 2) add 'menstrual regulation' to the same list; 3) for appliance methods determine 'household availability' asking separately for each method 'Are there any . . . in your house now?'; and 4) for all methods determine 'community availability' asking knowledge of nearest outlet where the method is available, perceived distance to this outlet, and cost of obtaining the method. Items 3) and 4) were not to be limited to current users or ever-users, but were to be asked of all respondents having knowledge of the method. The PSC discussed the proposal at some length and recommended that any additions to

the Core should be limited to two or three questions, and that these should first be tested in the field, preferably in a variety of cultural settings. The results of such tests should, moreover, be ready for consideration at the seventh meeting of the Technical Advisory Committee (TAC) in August 1976.

Recognizing the urgency of settling this matter before too many country surveys had been completed, the WFS organized a crash programme of field tests. Within a month a pilot study had been designed and a questionnaire had been drawn up, together with interviewers' instructions, a code book and a provisional tabulation plan. The study was not designed as a straight pre-test of the proposed modifications, but rather as an in-depth methodological pilot which could reveal more precisely how the proposed questions operate and what the responses mean. Consequently, the experimental questionnaire included not only the material to be tested but also a large number of probes and additional questions of an evaluative nature, as well as factual information (such as actual distance to nearest outlet) collected by the supervisors in the field. During the same period, appropriate executing agencies were engaged in three countries as follows: 1) the International Institute for Population Studies in Bombay, India; 2) the Office of the UN Regional Adviser to the WFS for Latin America, in Panama City, Panama; and 3) the Institute of Population Studies of Hacettepe University in Ankara, Turkey. In the following two weeks the questionnaire was translated into the local languages and interviewers were trained. Field work took about two weeks, local coding one week and despatch of coded questionnaires to London one week. In each country, a purposive sample of approximately 300 currently-married non-pregnant women aged 15 to 49 who knew at least one of the methods considered in the enquiry (pill, diaphragm, condom, IUD, menstrual regulation, pregnancy termination and sterilization) was used. All data processing and analysis was done in London, with punching and cleaning taking two weeks, and tabulation and report writing taking three weeks. The final report was thus produced in time for advance distribution to the members of the TAC in July, and is now scheduled for publication in the WFS Scientific Report Series.

The results may be summarized briefly as follows: 1) Inclusion of abortion in the list of methods under the name of 'pregnancy termination' leads to considerable under-reporting of knowledge and use of this method, even where the terminology used is understood. 2) The description of 'menstrual regulation' is not adequate, the method is confused with pharmaceutical products or folk methods which regulate menstruation but only if the woman is not pregnant, and which therefore are not fertility regulation methods. 3) The question on 'household availability' caused no problem

during the interview and the responses appear to be valid, in that methods claimed to be in the house were usually shown to the interviewer. The relationship of household availability to current use is complex: many women have pills or condoms in the house but do not use them, mostly because of side effects or because they had shifted to another method. More surprisingly, many women claim to be currently using the pill but do not have any in the house, explaining that they were menstruating or had just run out. The proportion of such cases is larger than expected and presumably reflects irregular patterns of use that require further study. 4) As to 'community availability': (a) the perceived nearest outlet was *in fact* the nearest one in only half the cases, and many current users do not use the outlet that they themselves perceive as nearest. The 'type' of outlet, on the other hand, was ascertained without difficulty and the responses appear to be valid. (b) The question on 'distance' to the outlet failed to elicit a definite estimate of distance in two-thirds of the cases, even after probing. In those cases where an estimate of distance was given there was considerable bias and individual variation. On the other hand, 'time of travel' to the outlet and 'means of transport' can be obtained from most respondents and have a high multiple correlation with the actual distance to the outlet (although there is considerable individual variation in the perception of time), and can thus be used as alternative indicators of distance or accessibility. (c) 'cost of travel' to the outlet can be obtained from most respondents and the responses are quite reasonable. However, one-third of the cases fail to provide an estimate of the 'cost of the method' at the outlet.

After consideration of these results, the TAC recommended that only three questions on availability should be included in the WFS Core Questionnaire, namely: 1) type of outlet where the respondent would go to obtain each method; 2) time of travel to that outlet; and 3) cost of the method at that outlet, asked separately for the pill, condom, IUD and female sterilization and optionally for male sterilization and injections (depending on level of use in the country concerned). These questions were issued as a supplement to be added to Section 3 of the WFS Core Questionnaire. The revised Section 3 was then considered and approved at the eighth meeting of the PSC in October 1976.

### 3.2.3 POST-ENUMERATION SURVEYS

The WFS exercise aims at obtaining high quality fertility data. Carefully designed questionnaires, strict field procedures, quality controls at all stages of the survey, and technical monitoring are all designed to realize this aim. In order to evaluate the success of this policy in terms of the quality of the data obtained, the WFS has been

advocating that some form of post-enumeration survey (PES) be executed where feasible. Post-enumeration surveys have been conducted in Fiji and Bangladesh; in Pakistan a study of pregnancy history methodology was carried out; and a reliability study was undertaken in Indonesia.

Obviously, one of the main concerns for WFS is that the data yielded by the maternity history (or pregnancy history) are of good quality, i.e., they reflect the true situation. The PES is meant to assess the reliability of the data obtained by the survey in general and, more specifically, that of data such as the age of the respondent, total number of live births, total number of pregnancies and dates of vital events.

The post-enumeration surveys and studies in Bangladesh, Fiji, Indonesia and Pakistan are now individually described.

### **Bangladesh**

Towards the end of the main field work in Bangladesh, the WFS Resident Adviser, Mr. L. Lewis reported that a spot-check in the Chittagong division had raised questions about the coverage and completeness of the household listing operation in that area. A high non-response rate for the city of Dacca was also reported. To investigate the situation, it was decided to undertake a combined quality control-cum-post-enumeration operation in a systematic way.

The objectives of the investigation were:

- 1) To verify responses in the community questionnaire among a representative group of villages.
- 2) To check the listing of households. This included the selection and interviewing of newly listed households, using the previous sampling interval and rejection of interviews of wrongly selected households.
- 3) To follow up non-response households and eligible respondents and interview them.
- 4) To make critical error checks, i.e., for major inconsistencies, missing data, incorrect selection of eligible respondents, arising out of manual and machine edits.
- 5) To re-interview, with a shortened questionnaire, the eligible respondents of a 10 per cent sub-sample of households successfully interviewed in the main survey.

The results were as follows:

- 1) **Checking of listings:** The listing check yielded a net addition of 28 sample households and 27 new eligible respondents to the original total of 6516.
- 2) **Non-response follow-up:** The main survey identified 6516 eligible respondents of which 6337 (97.2 per cent) were successfully interviewed. Of the remaining 179 eligible respondents 107 were included in the PES sub-sample, and 53 of these were successfully interviewed.

The main findings of the critical error check and community questionnaire check will probably be incorporated into the Bangladesh 'Problems Report' which is being written by the national staff.

### **Fiji**

The purpose of the PES, conducted some 7 weeks following the completion of the main fertility survey in 1974, was to investigate the degree of reliability of answers expressed in the main survey.

A sub-sample of women successfully interviewed in the main survey was drawn and yielded an effective sample size of 500 women. The questionnaire used for the PES was a shortened version of the main questionnaire without the household schedule. Contents of the PES questionnaire were as follows:

Section 1	Qs. 106-107
Section 2	All Qs. except Qs. 214-218
Section 3	All Qs. except Qs. 316-320, 324-332, 336-338 and 324-344
Section 4	All Qs. except Qs. 401-403, 411-414
Section 5	Qs. 501-505
Section 6	None
Section 7	All Qs.
Section 8	None

Field work was carried out over a period of 2 weeks. The success rate of the PES was disappointing as only 384 or 76.8 per cent of women were successfully interviewed. The explanation is that due to the short period of field work, there was little time for call-back, and both interviewer and respondent fatigue contributed to the low success rate. The following table indicates the reasons for non-interview.

Table III: SUCCESS RATE OF PES IN FIJI

	Number	Per Cent
Successfully interviewed	384	76.8
Unsuccessfully interviewed		
<i>Reasons for failure:</i>		
Refusal	15	3.0
Unable to locate address	12	2.4
House unoccupied for indefinite period	20	4.0
No one at home/away temporarily	45	9.0
Wrong woman interviewed by mistake	10	2.0
Other/unspecified reasons	14	2.8
Total effective sample size	500	100.0

Hand tabulations were undertaken following the PES and machine edits have been completed. Files are being matched and will be sent to Dr. Srikantan of the Population Council for analysis.

#### Indonesia

The reliability study for the Indonesia Fertility Survey (IFS) was designed primarily to assess the stability of the data obtained from the pregnancy history and other vital events, e.g., birth date, marriage dates, and so on. A secondary objective was to assess the reliability of both 'hard' and 'soft' data collected in the IFS. An attempt was also made to clarify the discrepancies between the information reported earlier in the IFS and that reported in the PES study. The clarification of discrepancies was categorized into differences due to 1) change in situation 2) change in opinion and 3) errors. The reliability study was conducted on 600 respondents from the IFS, selected in each of the 6 provinces of Indonesia. Field work took place in August 1976, approximately 2-4 months following the end of the main field work. The questionnaire was shortened and modified to consist of the following sections:

- Section 1      Respondent's background
- Section 2      Marriage history
- Section 3      Maternity history
- Section 4      Fertility regulation, selected questions

The study was carried out under the direction of Dr. Sam Suharto, National Director of the IFS and Mr. Bambang Sungkono, Survey Director, with assistance from WFS staff.

After the field work had been completed, the data were coded on to a specially designed coding sheet where the data from the main survey had already been coded. The two sets of data (from identical sources) were then examined and compared, question-by-question for each respondent. In cases of discrepancies which could not be resolved, a third interview by a senior field supervisor was undertaken and her/his investigation into the matter was recorded as extensively as possible for subsequent analysis. The final report prepared jointly by IFS professionals and WFS staff will be available early in 1977.

### Pakistan

This methodological research is designed to compare two varying approaches to the pregnancy history, i.e., the integrated pregnancy history as used in the National Impact Survey in Pakistan 1968-1969, and the separate pregnancy history as employed in the Pakistan Fertility Survey 1975, in order to establish to what degree they provide comparable data. A secondary objective is to establish the reliability of the 'hard data', e.g., date of birth, date of marriage, etc. and 'soft data', i.e., attitudes and expectations. About 1,200 respondents were interviewed in the rural areas of Punjab and North West Frontier Province during May-July 1976, i.e., approximately one year after the completion of the main field work.

**Table IV: SAMPLE SELECTION IN PAKISTAN PES**  
(1200 respondents)

600 new respondents		600 old respondents	
<i>Version A</i>	<i>Version B</i>	<i>Version A</i>	<i>Version B</i>
300 R's	300 R's	300 R's	300 R's
separate	integrated	separate	integrated
pregnancy	pregnancy	pregnancy	pregnancy
history	history	history	history

The new respondents were women drawn from the same clusters as used in PFS but who were not interviewed in the PFS. The two sub-groups of women subject to the integrated pregnancy history approach were interviewed using a shortened and modified version of the PFS questionnaire, i.e., Version B. The other women used a

shortened version of the PFS questionnaire, i.e., Version A. The following sections constituted the two versions of the PES study:

<i>Version A</i>	<i>Version B</i>
Section 1	Section 1
Section 2	Section 2
Section 3	Integrated Pregnancy History
Section 4	Section 4
Section 5*	Section 5*

All post-field work operations were carried out by the trained staff of the PFS and the Training and Research Evaluation Center. A data-tape will be made available to ISI/WFS.

### 3.3 DATA PROCESSING

During 1976 the WFS spent considerable time with participating countries to assist them in completion of their surveys. In addition to this work time has been spent refining the software available, such as the CONCOR editing program. The year under review also saw the development and testing of the CLUSTERS program for standard sample error calculations.

It should especially be noted that the WFS has required considerable 'real-life' experience during 1976 and now has a better idea of the situations likely to be met in the future. In data processing terms, each country participating in the WFS programme is an entirely new undertaking. WFS now expects to provide more assistance than was originally planned. The WFS data processing staff has begun to be involved in analysis of the techniques to be applied for further analysis of the data. To ensure that this work is being properly handled WFS has added two new staff members and two additional people under long-term consultancy.

CELADE has undertaken a contract to provide on-the-spot assistance for WFS participating countries in Latin America. This arrangement has worked out very well. Their knowledge of the demography and data processing community in the region has proved invaluable.

\* Excluding the 'orange pages' except for Question 5513.

**Table V: STATUS OF EDITING AND TABULATION SOFTWARE IN WFS COUNTRY SURVEYS (31 DECEMBER 1976)**

Country	Editing Software Used/Planned	Organization Providing Assistance	Status as of 31 December 1976	Tabulation Software Used	Organization Providing Assistance	Status as of 31 December 1976
1. Bangladesh	Customized	WFS	Completed	COCENTS	WFS	Programmed
2. Dominican Republic	CONCOR	CELADE	Completed	COCENTS	ISPC*	Completed
3. Colombia	CONCOR	CELADE	Programmed	COCENTS	CELADE	Not yet begun
4. Costa Rica	CONCOR	CELADE	Programmed	COCENTS	CELADE	Not yet begun
5. Fiji	Customized	WFS	Completed	COCENTS	WFS	Completed
6. Guyana	Customized	WFS	Completed	COCENTS	WFS	Programmed
7. Indonesia	Customized	WFS	Completed	COCENTS	WFS	Programmed
8. Jamaica	CONCOR	WFS	In process	COCENTS	ISPC*	Programmed
9. Jordan	Customized	Local	Completed	COCENTS	Local	Programmed
10. Korea	Customized	WFS	Completed	COCENTS	WFS	Completed
11. Malaysia	Customized	WFS	Completed	COCENTS	ISPC*	Completed
12. Mexico	CONCOR	CELADE	Not yet begun	COCENTS	CELADE	Not yet begun
13. Nepal	Customized	WFS	Completed	COCENTS	WFS	Completed
14. Pakistan	Customized	Local	Completed	Customized	Local	Completed
15. Panama	CONCOR	CELADE	Completed	COCENTS	CELADE	Not yet begun
16. Thailand	Customized	Local	Completed	COCENTS	ISPC*	Completed
17. Sri Lanka	CONCOR	WFS	Completed	CENTS	WFS	Programmed

\* International Statistical Programs Center, U.S. Bureau of the Census

**RELATION SOFTWARE IN WFS COUNTRY SURVEYS (31 DECEMBER 1976)**

Organization Providing Assistance	Status as of 31 December 1976	Tabulation Software Used	Organization Providing Assistance	Status as of 31 December 1976
WFS	Completed	COCENTS	WFS	Programmed
CELADE	Completed	COCENTS	ISPC*	Completed
CELADE	Programmed	COCENTS	CELADE	Not yet begun
CELADE	Programmed	COCENTS	CELADE	Not yet begun
WFS	Completed	COCENTS	WFS	Completed
WFS	Completed	COCENTS	WFS	Programmed
WFS	Completed	COCENTS	WFS	Programmed
WFS	In process	COCENTS	ISPC*	Programmed
Local	Completed	COCENTS	Local	Programmed
WFS	Completed	COCENTS	WFS	Completed
WFS	Completed	COCENTS	ISPC*	Completed
CELADE	Not yet begun	COCENTS	CELADE	Not yet begun
WFS	Completed	COCENTS	WFS	Completed
Local	Completed	Customized	Local	Completed
CELADE	Completed	COCENTS	CELADE	Not yet begun
Local	Completed	COCENTS	ISPC*	Completed
WFS	Completed	CENTS	WFS	Programmed

U.S. Bureau of the Census

Data tapes from the participating countries have begun to arrive at the WFS Professional Centre and the WFS is actively engaged in setting up an archival system for these.

### 3.4 DEVELOPMENTS IN DATA ANALYSIS

Despite the numerous problems encountered, achievements to date have shown the ability of WFS to organize the data collection work in the countries with proper quality control procedures. The data processing developments are reported above. Shifting the accent now to the analysis side, in 1976 the WFS established an analysis division. Data collection and data analysis form two closely related stages of the survey work. Therefore, it was not the intention of the WFS to designate a group of professional staff members to work exclusively in the analysis area. On the other hand, a team of staff members have been identified who will be spending relatively more of their time on analysis work as compared to data collection work. Data analysis needs are also being considered in the recruitment of new staff members. Detailed plans for analysis are being worked out but in general the WFS programme of work will develop in the following three areas:

- 1) Country Report No. 1
- 2) Second stage analysis and related research
- 3) Comparative studies

The progress in each area is summarized here:

#### 1) Country Report No. 1

The first Reports of the surveys in the Dominican Republic and Pakistan have now been published and the Fiji Principal Report is being printed. Reports on Malaysia and Thailand have been finalized and are expected to be out in early 1977. The progress with respect to other countries appears elsewhere in this report. The WFS Central Office provides the necessary assistance to the countries in the preparation of their reports. Also most of the countries have accepted the WFS suggestion to send the draft report to London for comments and suggestions from the central staff. WFS recommends that the countries should, in the first instance, produce all the basic tables specified in the document Guidelines to Country Report No. 1 and make available to WFS Central Office one set of these tables for future use and reference.

It is hoped that this procedure would also make it easy for the countries to use the WFS tabulation package COCENTS with minimum changes. However, this is not to be taken to mean that WFS expects all of these tables to be published, as they are, in the Country Reports. The national staff are required to carefully scrutinize these tables and in many situations they will have to be condensed or modified according to the local situation, and some of the tables might even be redundant in some countries. It might then be necessary to introduce these changes in the table formats and to do a second run of the tape to produce the final tables relevant for the country. The WFS staff has been giving assistance to the national staff in this work. The Guidelines document itself is being reviewed constantly on the basis of the experience gained and it is planned to issue from time to time such amendments as may be necessary.

## 2) Second stage analysis

Following the publication of the first Country Report, the participating countries are expected to carry out further in-depth analysis of their data. In this context, the WFS central office has prepared a document entitled 'Strategies for Analysis of WFS Data' which was first circulated among the members of the TAC and PSC for comment. A working party of six experts met in London in June 1976 and reviewed the document in the light of the comments received. The revised version was then submitted to the TAC meeting in August 1976 and also to the PSC in October 1976. The final version is now being printed and will be published shortly as a basic document.

As a supplement to this Strategy document, the WFS has now started work on a series of Technical Bulletins, each dealing with a specific methodological topic relevant to the analysis of fertility survey data. The first one in the series 'Some Notes on Statistical Problems Likely to Arise in the Analysis of WFS Surveys' is now published and the second one on 'Path Analysis and Model Building' is being finalized. Further bulletins dealing with both demographic and statistical technique are expected to be available during the course of 1977. A list of topics on which work has either started or is scheduled to start is given below.

Work has already commenced on the preparation of a prototype analysis plan for the data from the module on Community-level Variables using the Malaysian survey data with the co-objective of analysing the Malaysian data themselves. This is being carried out at the University of Michigan jointly by Professor W. Mason of Michigan and Mr. V. T. Palan, who was the field director of the Malaysian survey under the supervision of Professor Ronald Freedman, author of the module. In addition WFS

central staff have prepared draft tabulation plans for the modules on a) Abortion, b) Factors other than Contraception Affecting Fertility and c) General Mortality.

WFS has also contracted the London School of Hygiene and Tropical Medicine and the Office of Population Research, Princeton, to carry out independent evaluation of the quality of the maternity history data from the Fiji survey, which is also expected to result in a prototype plan to serve as a guideline for evaluating data from other surveys. According to Professor Ansley Coale, the Fiji data have stood up well to the tests. A full report will be available shortly.

### 3) Comparative studies

The Committee for the Comparative Analysis of Fertility constituted by the IUSSP has discussed the WFS comparative study and a report of the Committee has been made available to the WFS. The Committee has provided certain guidelines and has recommended that the WFS should now produce a plan for the comparative analysis and pilot the same using the data from the first two or three surveys. Work along these lines is scheduled to commence next year.

#### List of Proposed Technical Bulletins

- | No. | Topic  |
|-----|--|
| 1.  | Statistical Problems   |
| 2.  | Path Analysis and Model Building   |
| 3.  | Standardization  |
| 4.  | Sampling Errors  |
| 5.  | Fertility Indices from WFS Questionnaire                                   |
| 6.  | Pitfalls in Demographic Analysis   |
| 7.  | Multiple Contingency Tables  |
| 8.  | 'Own Children' Method  |
| 9.  | Birth Intervals - Open and Closed  |
| 10. | Evaluation of Birth Histories (Fiji)                                       |
| 11. | Analysis of Maternity Histories to Measure Fertility and to Detect Changes |
| 12. | Life Table Technique   |
| 13. | Life Table with Concomitant Information                                    |
| 14. | Community Level Data Analysis  |
| 15. | Economic Data Analysis   |
| 16. | Chi-Squared  |

17. Comparison of Standardization, Path Analysis and Multiple Contingency Analysis
18. A Technique for Quantifying Causal Determinants of Fertility Levels

### 3.5. TECHNICAL MONITORING

Since the start of the programme, the WFS has particularly emphasized the importance of the quality of data obtained in country surveys. The WFS central staff has thus paid close attention to the technical monitoring of these surveys. This monitoring is operating at intra-country as well as at inter-country levels.

The WFS has set up a system of technical monitoring whereby detailed information is collected on the characteristics of a survey and on the problems encountered in its execution and the solutions adopted. This data will be analyzed and used for the improvement of survey methodology by feedback of experience from developing countries which have completed the survey to those which have still to do so.

This provides an unique opportunity to improve the standardization of the data and thereby international comparability. If the feedback operation described above is properly organized there is also the possibility of a major advance in the quality of surveys in many countries.

The system of reporting to the WFS Professional Centre which was established in 1975 involves the following:

- 1) Each participating country is required to send a copy of every survey document to the WFS Professional Centre.
- 2) A full statement on sample design and its implementation is required.
- 3) Sampling errors will be systematically computed and compared.
- 4) An interviewers' de-briefing session and report is encouraged for every survey.
- 5) As far as possible it is hoped to complete a demographic plausibility check of each country's data before the Country Report No. 1 is finalized.
- 6) A check-list for reporting on factual points and subjective assessment has been prepared by WFS and is to be filled in separately by the survey country coordinator on the WFS staff and the national survey director. This check-list will also provide a framework for the evaluation report which each country is encouraged to prepare.
- 7) Survey costs are being monitored via monthly financial reports which are requested from each country.

In addition to the formal measures planned for intra- and inter-country monitoring, there is also the informal accumulation of experience by WFS staff and consultants. It is planned ultimately to publish reports of these experiences.

A check-list on technical monitoring was circulated to participants from developed countries at the UN Working Group on Social Demography Meeting in Warsaw in May 1976. Responses from these countries are awaited.

Technical monitoring of WFS surveys in the developing nations is currently underway: 21 countries, to date, have been asked to send in replies to the technical monitoring check list. The surveys of these countries are at various stages of progress:

- 3 are at the preparatory stage
- 1 is at the pre-test stage
- 2 are just finishing field work
- 9 are processing data
- 6 have completed or are near completion of their Country Report No. 1 (i.e. Dominican Republic, Fiji, Pakistan, Thailand, Malaysia and Korea).

The following countries have completed their check list: Fiji, Dominican Republic, Pakistan and Guyana. The National Statistics Office in Thailand has sent a reply for the husband survey but the Institute of Population Studies which conducted the main survey has not yet done so. Indonesia has submitted the major part of the check list. The Korean technical monitoring report is expected soon. Malaysia will write a problems report *in lieu* of a technical monitoring report. Replies from other surveys are expected shortly.

### 3.6 INFORMATION AND PUBLICATIONS

Communication of the developments and techniques employed in the WFS in 1976 took the form of lectures, discussions with visitors to the WFS Professional Centre, London, and dissemination of the basic documentation to teaching institutions and researchers throughout the world. A list of visitors to the Centre is found in Appendix II and of publications available by 31 December 1976, in Appendix III. Lectures given by the WFS professional staff are mentioned under Section 4.3 below.

In the WFS Basic Documentation Series two new publications appeared: the Training Manual and the Editing and Coding Manual. Publication began in 1976 of the French,

Spanish and Arabic versions of the basic documents. By December 1976 the following had been issued:

- French: Core Questionnaire, Survey Organization Manual, Manual on Sample Design, Training Manual, Supervisors' Instructions, Interviewers' Instructions.
- Spanish: Core Questionnaire, Survey Organization Manual, Supervisors' Instructions, Interviewers' Instructions.
- Arabic: Core Questionnaires, Survey Organization Manual.

Two new papers were issued in the Occasional Paper Series. The first by Leslie Kish *et al*, is entitled *Sampling Errors for Fertility Surveys*; the authors have worked out the standard errors and the corresponding debt and roh for a large number of variables in eight different surveys from five countries. The other paper *The Dominican Republic Fertility Survey: An Assessment of Procedures and Problems* by N. Ramirez *et al* is the second such report to be published on the problems encountered in a WFS survey. The 1975 Annual Report, the second progress report on the WFS, was published in March 1976. It was decided to circulate the *WFS Diary* every second month, five issues were therefore distributed in 1976.

The first paper in the new series of Technical Bulletins was issued in October 1976, *Some Notes on Statistical Problems Likely to Arise in the Analysis of WFS Surveys*, was authored by Sir Maurice Kendall. The second paper, *Path Analysis and Model Building* by Sir Maurice Kendall and C. O'Muireheartaigh was drafted and circulated for comment and finalized by the end of December. These Bulletins were recommended by the WFS Technical Advisory Committee in September 1975 to supplement the guidelines for the further analysis of WFS country survey data. This last document, *Strategies for the Analysis of WFS Data*, was finalized and prepared for printing in the Basic Documentation Series and will be available in January 1977.

To accommodate papers on research projects carried out by the WFS and collaborating bodies, a Scientific Report Series was initiated in late 1976. The first paper to be published in this series, by German Rodriguez is entitled *Assessing the availability of fertility regulation methods: Report on a methodological study*. It represents a collaborative exercise of the WFS and the International Institute for Population Studies, Bombay; the Office of the UN Regional Adviser to WFS for Latin America, Panama City; and the Institute of Population Studies of Hacettepe University, Ankara, Turkey. As the title suggests, the investigation is concerned with problems of assessing the

availability of fertility regulation methods in the household and community, in the context of a single round fertility survey.

During 1976 the information office sent out 4,200 publications on request. This is in addition to those sent out to the regular mailing list which rose to 2,900 by the end of the year. The publicity given to the WFS in various new-sheets undoubtedly boosted this demand. The WFS is increasingly receiving requests for the documentation for use as teaching material. Among the clippings picked up in 1976 were: JOICFD News, Asian Pacific Census Newsletter, Future (IPPF Newsletter for Indian Ocean Region); Amstat News; Ekonomi Indonesia; Jenin; Berita Yudha; Rabu; Sinar Harada Jum'at; Indonesian Times; UNECOSOC Reports; UNFPA Newsletter, Population; European Demographic Information Bulletin; Washington Post; Milliyet (Turkey); Financial Times; Le Nouveau Monde (Haiti); IIPS Newsletter, Bombay; POPLABS Newsletter; Trinidad Guardian; and UNIPUBS International Bibliography, Information and Documentation.

The system of depository libraries for WFS publications and the country reports, recommended by the Programme Steering Committee, was begun in 1976. By the end of the year 58 libraries in major cities throughout the world had agreed to act as WFS depositories; replies from a further 70 were awaited. A list of these libraries is found in Appendix IV.

## 4. Committees and Meeting

### 4.1 WFS PERMANENT COMMITTEES AND *AD HOC* MEETINGS

#### 4.1.1 PROGRAMME STEERING COMMITTEE

The Programme Steering Committee (PSC), which provides overall substantive guidance and review of the WFS programme, met twice during 1976. The committee consists of a chairman and four experts, serving in their individual capacities, appointed by ISI in consultation with IUSSP and the UN; and representatives of the IUSSP, UN Population Division, UN Statistical Office, UNFPA and USAID. During the Project Development Phase it was decided to invite the chairman of the Technical Advisory Committee to the meetings. Other invitees attend on an individual basis.

At its eighth meeting in 1976 the composition of the PSC was as follows:

Chairman	P. J. Bjerve (Norway)
Representatives:	
UN Population Division	L. Tabah M. A. El-Badry (alternate) R. O. Carleton (alternate)
UN Statistical Office	S. Goldberg W. Seltzer (alternate)
UNFPA	H. Gille N. Sadik (alternate)
USAID	R. T. Ravenholt J. Braeket (alternate)
IUSSP	C. Miró M. Livi-Bacci (alternate) B. Remiche (alternate)
Individual members:	C. Chandrasekaran (India) K. T. de Graft-Johnson (Ghana) F. E. Linder (U.S.A.) M. Macura (Yugoslavia)

### **Summary of PSC Proceedings**

The extension of the WFS programme and future finance were again prominent in the discussions of the WFS Programme Steering Committee when it held its seventh meeting in London from 5-7 April 1976. The PSC commented on the final report resulting from the evaluation carried out in October 1975. The PSC expressed their appreciation of the Evaluation Report and agreed with the USAID and UNFPA representatives that it should be published, without waiting for further improvements. In discussing finance, USAID expressed concern at the proportion spent on headquarters expenses. The PSC agreed that the amount spent on the visits and technical assistance of WFS central staff, particularly in data processing, was essential to fulfilling the concept of the WFS: the carrying out of high quality fertility surveys. The participation of the following countries was urged: Argentina, Brazil, India, Nigeria, Philippines, Tunisia and Uruguay. Among the developed countries, Australia, Canada and Norway had expressed their intention to participate.

Considering the progress made so far and prospects for future work, and noting with satisfaction that the WFS was being accepted by an increasing number of countries as an appropriate instrument for the study of fertility phenomena, the PSC expressed its appreciation for the work done by the Project Director and his staff, and for the moral, technical and financial support provided by the international and national agencies; and hoped that the basic financial and personnel requirements needed for the successful completion of national surveys, as well as the international comparative analysis, would be available to the WFS organization.

With the probability of an extension of the programme, and the movement of WFS activity to analysis, the PSC discussed the suitability of the present form of the Technical Advisory Committee (TAC). The general consensus was that after running its term, the TAC should be restructured so as to handle particular topics through sub-groups.

PSC were apprised of the problems encountered in the data-processing of the country surveys and recognized that any training of in-country personnel would in most cases delay production of the Country Report No. 1. The PSC agreed reasonable delays were acceptable when compensated by institutionalization of data processing capabilities. The UN Statistical Office and the UN Population Division expressed interest in cooperating on the data processing and suggested WFS should tap the skills of the UN experts both regional and inter-regional.

Other items discussed by the committee were the program on standard errors being developed by the WFS; additional questions on the availability of fertility regulation

methods in the home and in the community, for inclusion in the WFS Core Questionnaire; archival functions; country reports; publications; staffing; and the guidelines for further analysis. This last document was reviewed by PSC and finalized at a special working group meeting in July in London.

The eighth meeting of the Programme Steering Committee was held from 27-29 October 1976 at the offices of the Pan American Health Organization in Washington. Future funding and publication of the Country Reports featured prominently in the discussions. The Committee were informed that USAID had agreed to the extension of the WFS for a further two years. UNFPA was now processing the WFS funding request which would be submitted to the Governing Council at the end of January 1977.

In discussing the document on modifications to the Core Questionnaire (which incorporated the three questions recommended for inclusion by TAC: contraceptive outlet, length of time needed to reach there and cost of contraceptives) the PSC agreed that WFS draw up a guide to countries showing adaptation of the Core questions to certain situations such as polygamy. Satisfaction was expressed of the plan for country participation of the developing countries and the committee appreciated the degree of cooperation which had been achieved with the developed countries. The participation of Brazil, Nigeria and Tunisia was thought desirable and of other countries in Africa. Since the WFS had moved towards the analysis stage, the PSC agreed that the composition of the TAC should be reduced from 16 to 9 with the provision that additional experts might be added as appropriate but not as members of the TAC, and the Project Director should be able to invite the TAC as a body, or components of the TAC together with other experts, as the need arose.

The committee heard a report on the UN donors' meeting held in London in September 1976. Reports were also presented on the WFS special field studies in Bangladesh, Indonesia, Pakistan and Cameroon (see page 56).

Reviewing data processing activities of the WFS, the PSC recommended that co-operation of the WFS and the UN Statistical Office was highly desirable. The WFS had been working on procedures for protection of the data tapes. PSC considered the amount of work done on this impressive.

A progress report was given on the status of various Country Reports No. 1. Japan and Netherlands had published a report and Fiji, Malaysia, Thailand and Pakistan were nearing completion of theirs. In discussing the presentation aspects of these reports and of any summaries that might be produced, the PSC drew attention to the



W. J. Dixon (U.S.A.)  
R. Freedman (U.S.A.)  
G. Johnson-Acsadi (U.S.A.) (Rapporteur)  
G. M. K. Kpedekpo (Ghana)  
W. Parker Mauldin (U.S.A.)  
C. A. Miro (Panama)

The seventh TAC meeting of the WFS was held in The Hague from 16-18 August 1976. The Project Director gave a report on the current state of basic documentation which had been completed and would be published in Arabic, English, French and Spanish. The Core Questionnaire for use in developed countries would be translated into French and Russian, in keeping with the policy of the Economic Commission for Europe which was in close collaboration with the WFS. The second 'problems report' (the first being that of Fiji) *The Dominican Republic Fertility Survey: An Assessment*, was now available in English. The TAC noted the work done by WFS in technical monitoring, given the irregular feed-back from survey offices, and were pleased to learn of WFS's receipt of data tapes from the following countries: Japan, Fiji, Malaysia, Thailand and Dominican Republic.

The amount of data processing input required in virtually all the country surveys led to considerable discussion by the TAC members. The document, 'Guidelines for Data Processing and Packages' was appreciated and would aid in data processing. However, problems of varied questionnaires and too small computer in countries to handle available packages had hindered smooth operations. The TAC strongly advised that, in view of the urgent need in developing countries for data processing packages and in the light of future WFS surveys, the WFS should look into the miniaturization of some of the principal data processing packages.

The TAC welcomed the progress made in the preparation of Country Report No. 1 from the earlier participating countries.

In the field of analysis, the TAC expressed appreciation of the WFS effort to provide quality tabulations and the document 'Revision No. 1 to Guidelines for Country Report No. 1' was reviewed in this light. Further analysis was also discussed in reference to the documents 'Strategies for Analysis of WFS Data' and the Technical Bulletins: No. 1 'Some notes on Statistical Problems' and No. 2 'Path Analysis' and Model Building'.

The findings of the pilot study on the availability of fertility regulation methods recommended by PSC and conducted by the WFS, were presented to the seventh

TAC meeting. (See p. 53 for further details of the study). After lengthy discussions, it was decided to incorporate the following into the Core Questionnaire: for those who had heard of each method a question on the name of the nearest place where available, how long it took to get to that place and the cost of the method at that place. The three questions would be asked of all currently married women who had heard of one of the following methods: pill, IUD, condom, injection or sterilization. This revised section was to be submitted to the eighth PSC for their approval.

#### 4.1.3 STAFF MEETING

A general staff meeting was called by Sir Maurice Kendall from 26-30 January at the London WFS Professional Centre to provide the WFS staff members with an opportunity to discuss their experience, exchange views and comment on any aspect of the WFS programme. This meeting (the first of its kind) drew together the entire WFS headquarters staff, the WFS staff at the ISI Permanent Office and the UN Liaison Officers at New York headquarters and for Latin America.

#### 4.1.4 WORKING GROUP ON STRATEGIES FOR ANALYSIS

A working group of selected experts was held at WFS Professional Centre from 14-16 July 1976 to discuss the analysis of WFS data of the Country Report No. 1 and, more specifically, to discuss and finalize the document 'Strategies for the Analysis of WFS Data'. The draft of the document had already been circulated among the members of the TAC and also a selected group of research workers. After a critical evaluation of the document on the comments received, the Working Group produced a recommended revised version of the document. This was then submitted to the next TAC for final approval.

The working group consisted of: E. Berquo, R. O. Carleton, A. Coale, N. Ryder, K. Srinivasan and Leon Tabah.

WFS participants were: Sir Maurice Kendall, V. C. Chidambaram, G. Rodriguez, I. Pool and C. O'Muireheartaigh.

#### 4.1.5 MEETING ON STAFF REQUIREMENTS

In view of the current and prospective workload borne by the WFS staff in London, a committee under the chairmanship of Dr. Parker Mauldin met in London from 7-9 December to review the size and structure of the professional staff and to make recommendations thereon.

#### 4.1.6 REGIONAL MEETING ON DATA PROCESSING - CARIBBEAN

A Regional Meeting on Data Processing organized by the Caribbean Regional Co-ordinator, Dr. Jack Harewood, was held in Trinidad from 13-25 September 1976. Participants at the meeting were:

Jack Harewood	-	WFS Regional Co-ordinator
Norma Abdulah	-	WFS Caribbean Consultant
Antoinette Weekes	-	WFS Caribbean Consultant
Bogale Demissie	-	WFS London
Isbeth Bernard	-	Jamaica Fertility Survey
Nathley Caesar	-	Guyana Fertility Survey

The meeting was convened to discuss the tabulation plan for the Caribbean program. The meeting prepared detailed instructions for the re-coding of variables and then proceeded to write the COCENTS program. Programs for all tabulations set out in the Caribbean Guidelines for Report No. 1 were also prepared.

While the general format of the tables had been decided at an earlier Regional Meeting in 1975, it was decided to finalize the format upon reviewing the marginals for both the Guyana and Jamaica data. It was considered advisable to involve Trinidad and Tobago at a later date with data processing, as they were currently in the midst of the pre-test.

#### 4.1.7 WFS REGIONAL TECHNICAL MEETINGS

The WFS laid the plans in 1976 for two regional meetings to be held next year. The first for the Asian region will be held in Bangkok in March, the second in Mexico City in August 1977 after the IUSSP General Conference. The purpose of these meetings is to bring together the national staffs of countries participating in the WFS programme with a view to:

- 1) an exchange of experiences;
- 2) presentation of major findings, where available;
- 3) discussion of plans for further analysis of WFS national survey data and regional comparative analyses.

## 4.2 WFS PARTICIPATION IN OTHER MEETINGS

### 4.2.1 MEETING ON CONCOR EDITING PACKAGE

A meeting was held by Computer Methods Laboratory of the International Statistical Programs Center, U.S. Bureau of the Census at the WFS London Offices from 15-19 March 1976. This meeting aimed at developing a version of CONCOR (the editing package developed by CELADE) that would be usable on computers other than the IBM 360 on which the current version runs. Participants at the meeting, in addition to WFS data processing personnel, were Mr. R. Graves from Statistics Canada, Mr. J. Ortuzar (CELADE) and Mr. M. Hewitt (ISPC).

### 4.2.2 UN STANDING WORKING GROUP ON SOCIAL DEMOGRAPHY

A meeting of the UN Working Group on Social Demography was organized by the Division of Social Affairs of the UN Office, Geneva, with the collaboration of the Secretariat of the Economic Commission for Europe and ISI. The meeting was held at Zakopane, Poland, at the invitation of the Government of Poland from 25-28 May 1976 to discuss the tabulation plan for the comparative analysis of countries with low fertility, participating in the WFS.

The WFS was represented by Mr. Chidambaram. Representatives from the following seventeen countries attended the meeting: Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, Federal Republic of Germany, Hungary, Israel, Netherlands, Norway, Poland, Spain, U.K., U.S.S.R. and Yugoslavia.

Considerable interest was indicated in the computer packages which the WFS has developed, namely CLUSTERS, the sampling error package; CONCOR the machine editing package and COCENTS, the tabulation software. A 'Technical Monitoring Check List for Developed Nations' was also circulated to participants, requesting information on their country's survey. The idea of preparing Technical Bulletins on in-depth analysis was well received by the Working Group, particularly the one on multivariate analysis. A meeting is scheduled for late 1977 or 1978 to consider matters relating to methodology, analysis and data processing and to compare experiences between countries.

### 4.2.3 SIXTH INTERNATIONAL POPELABS CONFERENCE

The sixth International Conference of Laboratories for Population Statistics (POP-LABS) was convened in Voorburg, The Hague, from 21-24 June 1976. The WFS

was represented by Sir Maurice Kendall and Mr. Yasar Yaser. Sir Maurice presented a paper prepared by Dr. A. Marckwardt, entitled 'Estimation of Age-Specific Fertility Rates and Imputation of Missing Dates'. Ms. P. Rodríguez, WFS staff, acted as conference secretary.

#### 4.2.4 UN MEETING ON DATA PROCESSING IN DEVELOPING COUNTRIES

A meeting was convened by the United Nations Statistical Office at the UN Secretariat Building, New York from 13-14 October 1976 to review and discuss the computer software, methodology and training assistance for censuses and surveys in developing countries. The WFS was represented by Mr. G. Thomas, Assistant Director for Data Processing at the WFS Professional Centre. An international body of representatives from several organizations participated at the meeting.

#### 4.2.5 OECD WORKING GROUP MEETING

The OECD held a working group meeting on a Development Centre Research Project entitled 'Integrated Approach to Improving the Status of Young Women in Developing Countries' on 19 November 1976 in Paris. WFS was represented by Dr. German Rodriguez of WFS headquarters. Considerable interest was expressed in WFS survey operations and the possibility of utilizing WFS data for the research project. Mrs. Winnifred Weekes Vagliani of the Development Centre, OECD, will visit WFS in January 1977 for discussions with WFS staff.

#### 4.2.6 UNESCAP COMMITTEE ON STATISTICS

Sir Maurice-Kendall and Ms. Agnes Whitfield attended the ESCAP meeting held in Tehran, from 12-18 December. Since a large number of countries in the ESCAP region are participating in the WFS programme, WFS presence at the meeting was relevant. A working paper on regional programme for the 1980 round of world population and housing censuses was presented which invited comment from WFS.

### 4.3 LECTURES

#### 4.3.1 INSTITUTE OF SOCIAL STUDIES, THE HAGUE

In March a group of students from the above institute visited the WFS Professional Centre and were given lectures on the WFS by Sir Maurice Kendall and Dr. C. Scott.

#### 4.3.2 UNIVERSITY OF LOUVAIN 'QUETELET CHAIR 1976'

At the invitation of the Department of Demography of the University of Louvain, Belgium, the WFS presented a background paper entitled 'WFS - A Must for Countries and a Challenge for the Researchers'. The Session was attended by Mr. V. C. Chidambaram and Dr. C. Scott from 29-30 April 1976.

#### 4.3.3 LECTURES ON WFS TO UNIVERSITY OF ARKANSAS AND FLORIDA STATE UNIVERSITY

Sir Maurice Kendall delivered a lecture on the WFS and statistical problems to the students and staff of the University of Arkansas, Fayetteville, on April 27 and to the Department of Statistics of Florida State University on April 29. He also met the participants in the Environmental Health Measurement and Statistics Training Program to discuss environmental statistical problems.

#### 4.3.4 STATISTICS CANADA

Sir Maurice Kendall lectured on the WFS to a group convened by Dr. Ivan Fellegi at Statistics Canada, Ottawa, on November 1. Keen interest was expressed in WFS publications and substantial common interest in survey problems.

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#### 4.3.5 U.S. DEPARTMENT OF HEALTH AND WELFARE

Sir Maurice Kendall lectured on the WFS at the Department of Health, Education and Welfare, Washington D.C. on November 5. This meeting was attended by some

100 members of various U.S. Government Departments. Dr. William Pratt of the National Center for Health Statistics, the executive agency for the U.S.A. Fertility Survey, was present at the meeting.

#### 4.3.6 INSTITUTE FOR PROFESSIONAL EDUCATION, VIRGINIA, U.S.A.

Sir Maurice Kendall delivered a lecture on model building to the Institute of Professional Education, Virginia, in early November 1976.

## 5 Personnel

### 5.1 WFS STAFF

#### 5.1.1 WFS PROFESSIONAL CENTRE, LONDON

Recruitment of personnel to the WFS Professional Centre in 1976 has continued to be mainly in the Data Processing and Analysis Divisions of the WFS. As a number of participating countries are reaching the data processing and analysis stages, the strengthening of the staffing situation in these areas was necessary. A number of consultants were used in 1976, a list of whom is found in Appendix I.

As of 31 December 1976, the WFS professional staff numbered 29, as indicated below. This list is followed by notes on staff changes during 1976.

Sir Maurice Kendall	Project Director (U.K.)
Dr. C. Scott	Deputy Director for Data Collection and Co-ordination (U.K.)
Mr. Y. Yaser	Deputy Director for Planning and Administration (Turkey)
Mr. G. Thomas	Assistant Director for Data Processing (U.S.A.)
Mr. V. C. Chidambaram	Assistant Director for Analysis (India)
Ms. C. Linzey	Office Manager (U.K.)
Dr. M. Akmal	(Bangladesh)
Ms. R. Ahmed	(Bangladesh)
Ms. A. Attygalle	(Sri Lanka)
Mr. D. Bogale	(Ethiopia)
Mr. J. Cleland	(U.K.)
Mr. D. Farrell	(U.S.A.)
Mr. H. Jemai	(Tunisia)
Dr. M. Khalil	(Egypt)
Dr. R. Little	(U.K.)
Dr. A. MacDonald	(Surinam)
Dr. A. Marekwardt	(U.S.A.)
Mr. D. Nussli	(France)
Mr. M. Pasaba	(Philippines)

Mr. M. Pearce	(U.K.)
Dr. T. Pullum	(U.S.A.)
Mr. L. Rehlin	(Sweden)
Dr. G. Rodriguez	(Chile)
Ms. P. Rodriguez	(Chile)
Mr. M. Vaessen	(Netherlands)
Dr. V. Verma	(India)
Ms. J. Verrall	(U.K.)
Mr. R. Ward	(New Zealand)
Ms. A. Whitfield	(U.K.)
Dr. L. Williams	(U.S.A.)

#### Notes

Ms. Gladys Gilbert returned to the U.S.A. in February 1976.

Ms. Pippa Simpson returned to Queen Mary College London in October but is still serving as a data processing consultant to the WFS.

Mr. Christos Xenos left the WFS at the end of June.

Mr. Drew Farrell joined WFS in May 1976. He was previously with the U.S. Bureau of the Census as a computer programmer.

Mr. Hedi Jemai took up appointment with WFS in September. He was formerly with the Centre d'Etudes et de Recherches Economiques et Sociales in Tunis.

Dr. Rod Little joined WFS Analysis Division in September. Prior to this he was lecturing in Statistics at the University of Chicago.

Mr. Daniel Nussli took up an appointment in the Data Processing Division from September 1976. He was formerly Technical Assistant in Upper Volta, seconded from the Ministry of Cooperation, France.

Mr. Russ Ward joined the WFS Data Processing Division in November, after working some months as a temporary member of staff.

### 5.1.2 ISI PERMANENT OFFICE, THE HAGUE

As of 30 December 1976, staff associated with the WFS programme at the Permanent Office of the ISI in Voorburg, The Hague, were as follows:

Mr. E. Lunenberg*	Director
Dr. J. Ch. W. Verstege*	Associate Director
Mr. C. J. Hendriks*	Deputy Director for Finance
Mr. R. A. Henwick	Contract Officer
Ms. M. H. K. Evans	Information and Publications Officer
Mr. T. Bakker*	Personnel Officer
Mr. G. Mast*	General Services Officer
Mr. W. Versluis*	Assistant Finance Officer
Mr. D. I. Smith	Senior Administrative Officer
Mr. H. v. Klaveren*	Accounts Officer

\* Part-time only.

#### Notes

Mr. H. R. Ryzel left the WFS in October 1976.

### 5.2 UN LIAISON OFFICERS

#### UN LIAISON OFFICER FOR ASIA

The number of UN liaison officers appointed to the WFS programme rose to three when Mr. Basilio Aromin was appointed in February 1976. Mr. Aromin, formerly with ESCAP, covers the Asian region and is based in Bangkok. A briefing session was organized for him in early March at WFS London Headquarters. During the year, he visited several of the participating countries in the region to familiarize himself with the WFS survey in those countries.

Mr. Aromin has also been actively involved in preliminary negotiations with the Governments of Burma and Philippines regarding their participation in WFS.

#### UN LIAISON OFFICER FOR LATIN AMERICA

Mr. Hildebrando Araica continued to assist the WFS programme in Latin America in 1976. Among other activities he initiated, together with Arthur Conning of CELADE, a training session on the CONCOR program in Panama City in May 1976. Mr. Araica

was also a member of the WFS survey design visits to Peru and Venezuela. In May the Office of the U.N. Liaison Officer to WFS for Latin America, in cooperation with the Ministry of Health in Panama, undertook for WFS a pilot study on the availability of fertility regulation methods in the home and community.

UN LIAISON OFFICER, UN HEADQUARTERS, NEW YORK

Mr. Robert Carleton, UN Liaison Officer, UN Headquarters, New York, continued to provide an indispensable link with UN Headquarters and with the regional liaison staff, besides supplying extensive and valuable advice on the whole range of WFS activities. Mr. Carleton was present at the meetings of the Programme Steering Committee and Technical Advisory Committee held by WFS in 1976.

## Appendix I

### INTERNATIONAL COLLABORATION: A LIST OF EXPERTS CONSULTED BY WFS

#### RESIDENT ADVISERS

- James Allman Resident Adviser to the Haiti Fertility Survey.  
Benoit Ferry Resident Adviser to the Cameroon Fertility Survey, (seconded by Orstom, Paris).  
Ellen Hardy Resident Adviser to the Dominican Republic Fertility Survey.  
Lauri Lewis Resident Adviser to the Bangladesh Fertility Survey, Jan.-April and Aug.-December.  
Hannah Rizk Resident Adviser to the Jordan Fertility Survey, April, May, June.

#### CONSULTANTS

- Norma Abdulah Ms. Abdulah has worked in the Caribbean operations.  
John Adams UN Consultant in Bangladesh. Mr. Adams assisted with the machine editing of the Nepal Fertility Survey data.  
Marie Argana Bureau of the Census, Washington D.C. Ms. Argana contributed substantially to the Korea Fertility Survey.  
William Brass London School of Hygiene and Tropical Medicine. Professor Brass is involved in developing techniques for adjustment of known omissions and deficiencies of dates and events in the maternity history section of the Core Questionnaire.  
Pierre Cantrelle Office de la Recherche Scientifique et Technique Outre-Mer, France. He has advised WFS on French-speaking countries in Africa.  
Ansley Coale Princeton University. He has been involved in cooperation with the London School of Hygiene and Tropical Medicine in

carrying out evaluation tests on data from the Fiji Fertility Survey. It is hoped that the results will appear as a prototype report which will serve as a guideline for the evaluation of data from other surveys.

**Ronald Freedman**

University of Michigan. Professor Freedman is developing plans for analysis of the Community-level Variables and is supervising the preparation of several projects in the context of the second stage analysis of the Malaysian survey data.

**Jack Harewood**

University of the West Indies. Dr. Harewood serves as the Regional Co-ordinator for the WFS in the Caribbean Fertility Surveys (Guyana, Jamaica, and Trinidad and Tobago).

**Allan Hill**

Regional Representative for Western Asia, Amman, Population Council. Dr. Hill assisted in the preparation of the plans for the Kuwait survey.

**Axel Kersch**

Austrian Statistical Department. Mr. Kersch has been commissioned by WFS to summarize the salient features of the Fiji Country Report No. 1 for wider dissemination to the mass media and public.

**Leslie Kish**

University of Michigan. Professor Kish in conjunction with R. H. Groves and K. P. Krotki co-authored Sampling Errors for Fertility Surveys, published by the ISI in the WFS Occasional Paper Series.

**William Mason**

University of Michigan. Dr. Mason in collaboration with the national staff of the Malaysian National Fertility Survey will analyze data from the survey to determine and interpret the relevance of community-level factors for knowledge, attitudes and practices regarding fertility related phenomena.

**Carol Metzger**

Control Data Corporation, London. Ms. Metzger assisted with computer operations at WFS London Office.

- Eva Mueller University of Michigan. Ms. Mueller assisted with the Thailand Fertility Survey.
- C. O'Muircheartaigh London School of Economics. He has worked as a consultant for the Analysis Division of the WFS and attended the discussions in the 'Strategies for Analysis of WFS Data'. Co-authored with Sir Maurice Kendall the Technical Bulletin entitled, 'Path Analysis and Model Building'. He is also assisting with the sample design of the Lesotho Fertility Survey.
- Ian Pool Carleton University, Ottawa. Dr. Pool worked as a consultant for the Analysis Division of the WFS for a year until August 1976. He was responsible for drafting the recommendations for in-depth analysis to follow Country Report No. 1, entitled 'Strategies for Analysis of WFS Data'.
- Thomas Pullum University of California (Davis). He joined the Analysis Division of the WFS as a consultant for a year from mid-1976. Dr. Pullum among other activities developed STAND - a FORTRAN computer program which calculates standardized proportions and means from the cross-tabulations used for Country Report No. 1. It will appear as a Technical Bulletin. He is also assisting the Sri Lanka Fertility Survey in writing the first Country Report.
- Norman Ryder Princeton University. Professor Ryder was a member of the working group meeting in London on the document, 'Strategies for Analysis of WFS Data'. He continued to give advice on WFS plans for analysis.
- Pippa Simpson Queen Mary College, London. Previously a member of the WFS staff, Data Processing Section, Ms. Simpson is now a consultant with WFS.
- 
- I. Sivin Population Council. Mr. Sivin assisted with the sample design of the Colombia and Venezuela fertility surveys.

K. Srinivasan

Indian Population Centre, Bombay. Dr. Srinivasan participated in the working group in London on 'Strategies for the Analysis of WFS Data'.

K. Srikantan

Dr. Srikantan has worked on the analysis of the PES data from Fiji.

Yuzuru Takeshita

University of Michigan. Dr. Takeshita assisted in the preparation of the Country Report No. 1 of the surveys in Korea and Malaysia.

Russ Ward

Control Data Corporation. Mr. R. Ward served as a consultant in the Data Processing Section of the WFS London Offices from June-September 1976, after which he joined the staff.

Antoinette Weekes

Central Statistical Office, Trinidad and Tobago. Ms. Weekes has been involved in the data processing work for Caribbean surveys.

J. Massiah

University of West Indies, Barbados. Ms. Massiah has been involved in the training programme for the Guyana Fertility Survey and the preparations for the tabulations of the Caribbean Fertility Surveys.

Helen Ware

Australian National University. Dr. H. Ware, a WFS consultant in Cameroon for 2 months, carried out an investigation into the linguistic problems of the Cameroon Fertility Survey. Her report will be published in early 1977.

#### ORGANIZATIONS

##### **Economic Commission for Europe**

WFS is in close cooperation with the United Nations Economic Commission for Europe which is responsible for the enrolment of European countries in the WFS

programme. The European comparative analysis will be done by the Population Team of the General Economic Analysis Division of the ECE together with the UN Working Group in Social Demography.

**Cairo University**

The Faculty of Economic and Political Science of Cairo University provided valuable assistance with translation into Arabic of the Core Questionnaire, Manuals, and Modules.

**CELADE**

The Latin American Programme of WFS is carried out in close collaboration with CELADE. WFS has signed an agreement with CELADE for the organization to provide data processing assistance to WFS countries in Latin America. WFS has also adapted CELADE's CONCOR program for the editing of WFS data.

**International Institute of Population Studies - Bombay**

IIPS conducted the pilot study on the availability of fertility regulation methods in Bombay.

**Institute of Population Studies - Ankara**

The pilot study on the availability of fertility regulation methods was carried out by the Institute of Population Studies of Hacettepe University, Ankara.

**Ministry of Health - Panama City**

The Population Branch of the Ministry of Health, Panama City, Panama, worked together with the Office of the UN Liaison Officer to WFS for Latin America in carrying out the third pilot study on the above-mentioned subject.

**ISPC**

The International Statistical Programs Center of the U.S. Bureau of the Census provided substantial *ad hoc* computer services to the surveys in Thailand, Malaysia, Dominican Republic and the Caribbean. ISPC's assistance in the data processing of the early participating surveys allowed WFS to strengthen its data processing capabilities.

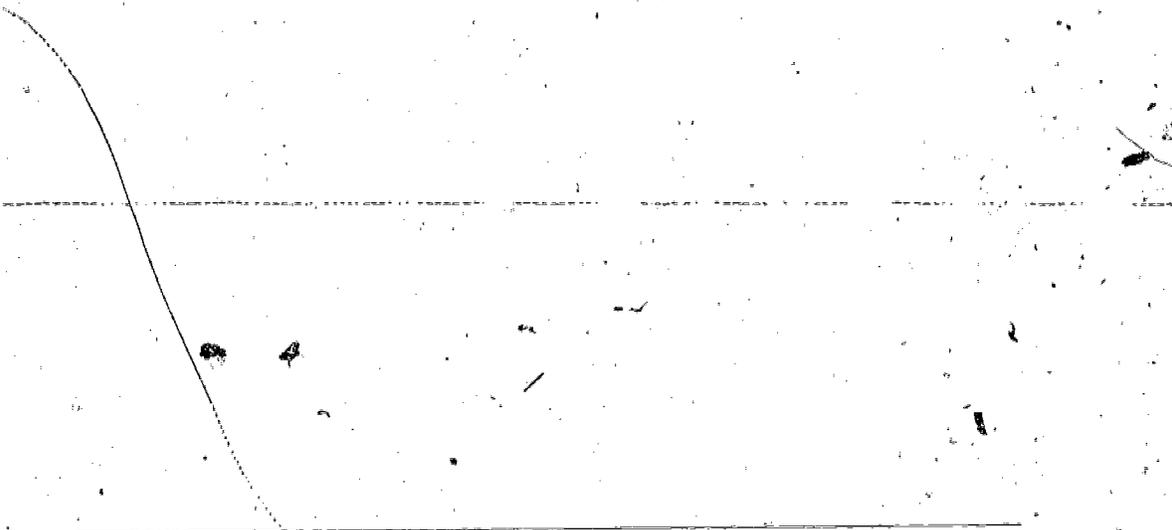
### **IUSSP**

The IUSSP is cooperating with the WFS in all technical aspects of the survey programme and is a permanent member of the Programme Steering Committee. A majority of the TAC members are also members of IUSSP. The Union's Committee on Comparative Analysis of Fertility has made recommendations to the WFS on comparative analysis.

Two sessions of the forthcoming IUSSP General Conference at Mexico City will be devoted to discussions of further analysis of WFS data.

### **Office de la Recherche Scientifique et Technique Outre-Mer (ORSTOM)**

ORSTOM is providing WFS with a staff member and seconded Dr. Ferry as Resident Adviser to the Cameroon Fertility Survey.



## Appendix II

### VISITORS TO WFS PROFESSIONAL CENTRE, LONDON

A large number of distinguished visitors made calls to the London Professional Centre during 1976. The purpose of the visits were diverse, ranging from courtesy calls, enquiries and preliminary discussions on country participation, to negotiation of contracts.

The list excludes all PSC and TAC members, members of working party meetings in London, consultants, resident advisers and UN liaison officers. These visitors are mentioned elsewhere in the Report, under the appropriate headings, e.g. PSC meetings, consultants, etc.

The following people paid visits to WFS London Office during 1976:

Dr. Valentina Steshenko	Department of Demography, Ukraine Academy of Science, Kiev.
Dr. Serim Timur	UNESCO Paris.
Ms. Sheila Cook	London School of Hygiene and Tropical Medicine.
Mr. A. Abdulmadjid	Indonesia Fertility Survey.
Messrs. R. Chander and V. T. Palan	Malaysia Fertility Survey.
Messrs. Jensen and Brunborg	Norway Fertility Survey.
Mr. Dhakhwa	Nepal Fertility Survey.
Dr. Bradley Wells	POPLABS.
Messrs. M. Coruh and S. Uner	Turkey Fertility Survey.
Dr. S. Hamid	American University of Cairo.
Mr. Sujito	Indonesia Fertility Survey.
Mr. Edward Gregory	UNFPA.
Dr. Aykut Toros	Institute of Population Studies, Hacettepe University, Turkey.
Mr. Joseph Ah Kong	Director of Statistics, Mauritius.
Ms. Phyllis T. Piotrow	Population Crisis Committee.
Mr. S. A. Meegama	Sri Lanka Fertility Survey.
Mr. Allan G. Hill	Population Council.

Ms. Rose Frisch  
Mr. Allaudin  
Dr. Parmeet Singh  
Dr. John Blacket

Mr. P. Krishnan  
Dr. A. Maitra  
Ms. C. Pejaranonde and Ms. Sauvaluck  
Dr. Ivor Francis  
Mr. Bruno Remiche  
Mr. G. Rodgers  
Mr. J. Coker  
Mr. R. Graves  
Mr. T. Ortuzar  
Mr. A. Conning  
Mr. M. Hewitt  
Ms. Palmerante  
Mr. A. Braddock  
Miss Isbeth Bernard  
Lic. V. Canales  
Dr. Richard E. Bilsborow  
Dr. Helen Koo

Dr. Joan Lininger  
Mr. Luis Porras  
Mr. A. Mwaniki  
Mr. J. Tuladhar  
Dr. Joe Stycos  
Dr. Jerome Van Finneken  
Dr. Phil Burnham

H. Léridon

Mr. A. Nkougourou  
Professor G. Kalton  
Mr. Nigel Hawkes

Harvard Center for Population Studies.  
Pakistan Fertility Survey.  
Kenya Fertility Survey.  
Institute of Development Studies, Sussex  
University.  
University of Alberta.  
ECA, Addis Ababa.  
Thailand Fertility Survey.  
Cornell University.  
IUSSP.  
ILO  
Federal Office of Statistics, Nigeria.  
Statistics Canada.  
CELADE.  
CELADE.  
US Bureau of the Census.  
Population Council.  
US Bureau of the Census.  
Jamaica Statistics Office.  
CELADE.  
POPLAB.  
Research Triangle Institute, North Carolina.  
POPLAB.  
Director, Statistics Bureau, Guatemala.  
Kenya Fertility Survey.  
Nepal Fertility Survey.  
Cornell University.  
IPPF.  
University College London, Anthropology  
Department.  
Institut National d'Etudes Démographiques, France.  
Cameroon Fertility Survey.  
University of Southampton.  
Science Correspondent, London *Observer*.

Dr. Monwar Husain

Dr. Rafiqul Huda Chowdhury

Dr. Homam El-Hashmy

Mr. W. Rodwell

Mr. E. H. Choe

Dr. D. Hogan

Dr. I. Faaland

Dr. A. Adhaka

Mr. Miranda

Acting Chairman, Bangladesh Institute of  
Development Studies.

Senior Research Demographer, Bangla-  
desh Institute of Development Studies.

Planning Department, Kuwait,

ICL, London.

Korea Fertility Survey.

University of Chicago.

Development Economics Research Advi-  
sory Project, Norway ,

POPLAB.

Christian Michelsen Institute.

## Appendix III

### WFS PUBLICATIONS PROGRAMME

Status as of 31 December 1976

GENERAL BROCHURE: English, French, Spanish, Arabic

PROGRESS REPORTS: The World Fertility Survey: The First Three Years  
(English only) The World Fertility Survey: January 1975-December 1975

OCCASIONAL PAPERS (English only)

- |  |   |
|--|---|
| 1. Fertility and Related Surveys   | William G. Duncan                         |
| 2. The World Fertility Survey:<br>Problems and Possibilities WFS Inventory:<br>Major Fertility and Related Surveys 1960-73 | J. C. Caldwell                            |
| 3. Asia  | } Samuel Baum <i>et al</i>                |
| 4. Africa  |   |
| 5. Latin America   |   |
| 6. Europe, North America and Australia   |   |
| 7. The Study of Fertility and Fertility Change in<br>Tropical Africa   | J. C. Caldwell                            |
| 8. Community-level Data in Fertility Surveys   | Ronald Freedman                           |
| 9. A Selected Bibliography of Works on Fertility   | György T. Acsadi                          |
| 11. Economic Data for Fertility Analysis   | Deborah S. Freedman<br>(with Eva Mueller) |
| 12. Economic Modules for Use in Fertility<br>Surveys in Less Developed Countries   | Deborah S. Freedman<br>and Eva Mueller    |
| 13. Ideal Family Size  | Helen Ware                                |
| 14. Modernism  | David Goldberg                            |
| 15. The Fiji Fertility Survey:<br>A Critical Commentary  | M. A. Sahib <i>et al</i>                  |
| 16. The Fiji Fertility Survey:<br>A Critical Commentary - Appendices   | M. A. Sahib <i>et al</i>                  |

17. Sampling Errors for Fertility Surveys L. Kish *et al.*  
18. The Dominican Republic Fertility Survey: N. Ramirez *et al.*  
An Assessment

WFS BASIC DOCUMENTATION

1. Core Questionnaires (English, French, Spanish; Arabic)  
2. Survey Organization Manual (English, French, Spanish; Arabic)  
3. Manual on Sample Design (English, French at press)  
4. Training Manual (English, French)  
5. Supervisors' Instructions (English, French, Spanish)  
6. Interviewers' Instructions (English, French, Spanish)  
7. Editing & Coding Manual (English)

TECHNICAL BULLETINS (English only)

1. Some Notes on Statistical Problems Likely to Arise in the Analysis of WFS Surveys Sir Maurice Kendall

## Appendix IV

### LIST OF LIBRARIES IN THE WFS DEPOSITARY SYSTEM

#### Africa

The Librarian  
UN Economic Commission for Africa  
P.O. Box 3001  
ADDIS ABABA, Ethiopia

The Population and Social Sciences  
Library  
Institute of Statistical, Social and  
Economic Research  
University of Ghana  
P.O. Box 74  
LEGON, Ghana

Le Bibliothèque,  
Centre Ivoirien de Recherches  
Economiques et Sociales,  
B.P. 28295,  
ABIDJAN, R.C.I.

The Library  
Central Bureau of Statistics  
P.O. Box 30266  
NAIROBI, Kenya

Documents Section  
University Library  
University of Ife  
ILE-IFE, Nigeria

The Librarian  
UN Demographic Research and  
Training Unit  
Fourah Bay College  
University of Sierra Leone  
FREETOWN, Sierra Leone

The Librarian  
Department of Statistics  
Private Bag x44  
PRETORIA 0002, Republic of  
South Africa

The Librarian  
Institute of Statistics and Applied  
Economics  
Makerere University  
P.O. Box 7062  
KAMPALA, Uganda

North and South America  
and the Caribbean  
Biblioteca y Hermeteca  
Departamento Difusion Estadística  
Instituto Nacional de Estadística  
y Censos  
Secretaria de Estado de Programación  
y Coordinación  
Hipolito Yrigoyen 250 - 12 Piso  
Buenos Aires, Argentina

Institute of Social and Economic  
Research  
(Eastern Caribbean)  
University of the West Indies  
P.O. Box 64  
BRIDGETOWN, Barbados

Library of Congress  
WASHINGTON, D.C. 20540, USA

The Library  
DESEC  
Casilla 469  
LA PAZ, Bolivia

Biblioteca Central do IGBE  
Av. Franklin Roosevelt, 166  
20 000-RIO DE JANEIRO-RJ, Brazil

Corporación Centro Regional de  
Población  
Centro de Documentación  
Carrera 6, No. 76-34  
BOGOTÁ, D.E., Colombia

The Library  
Centro de Estudios Demográficos  
Ave. 41 No. 2003 e/ñ 20 y 22  
Marianao 13  
HAVANA, Cuba

The Library  
Consejo Nacional de Población y  
Familia  
Secretaría de Estado de Salud Pública  
Apartado Postal 1803  
SANTO DOMINGO, Dominican  
Republic

The Library  
Ministry of Economic Development  
Ministerial Building, P.O. Box 542  
GEORGETOWN, Guyana

The Library  
Department of Statistics  
9 Swallowfield Road  
KINGSTON 5, Jamaica

Sección de Adquisiciones  
Biblioteca  
El Colegio de Mexico  
Apartado Postal 7-977  
MEXICO 7, D.F., Mexico

Biblioteca  
Dirección de Estadística y Censos  
Contraloría General de la República  
Apartado 5213  
PANAMA 5, Panama

The Library  
Central Statistical Office  
Textel Building, 1 Edward Street  
PORT OF SPAIN, Trinidad and  
Tobago

The Library  
Centro de Investigaciones en Ciencias  
Sociales  
Apartado 12863  
CARACAS 101, Venezuela

**Asia and Oceania**

The Library  
Department of Demography  
Australian National University  
P.O. Box 4  
CANBERRA, A.C.T. 2600, Australia

The Library  
Institute of Economics  
RANGOON, Burma

The Library  
Bureau of Statistics  
Jansen Ho Building  
Carnavon Street, P.O. Box 2221  
SUVA, Fiji

The Library  
Census and Statistics Department  
Kai Tak Commercial Building  
317 Des Voeux Road, Central  
HONG-KONG

The Library  
Institute for Social and Economic  
Change  
BANGALORE 560 040, India

The Library  
International Institute for Population  
Studies  
Govandi Station Road  
Deonar  
BOMBAY 400 088, India

The Library  
Institute of Population Problems  
Ministry of Health and Welfare  
2-2, 1-Chome, Kasumigaseki,  
Chiyoda-ku  
TOKYO, Japan

The Library  
Statistical Information Division  
Economic Planning Board  
Bureau of Statistics  
SEOUL, Republic of Korea

The Library  
Department of Statistics Malaysia  
Wisma Statistik, Jalan Young  
KUALA LUMPUR 10-01, Malaysia

Population Institute Library  
attn. Rosita Matro  
University of the Philippines  
Padre Faura, P.O. Box 479  
MANILA, Philippines

The Clearing-House and Information  
Section Reference Centre, ESCAP  
Population Division United Nations  
Building  
Sala Santitham  
BANGKOK 2, Thailand

Europe  
Austrian Central Statistical Office  
Library  
Heldenplatz, Neue Burg  
A-1014 VIENNA, Austria

The Library  
Centrum voor Bevolkings- en  
Gezinsstudien  
Ministerie v. Volksgez. en het Gezin  
Botanic Building, St. Lazaruslaan 10  
1030 BRUSSELS, Belgium

The Library  
Scientific Research Institute of  
Statistics  
2 Volov Street  
SOFIA 27, Bulgaria

Federal Office of Statistics  
VUSEI Information Centre, Library  
Sokolovská 142  
186 00, PRAHA 8 - KARLIN,  
Czechoslovakia

The Library  
The Population Research Institute  
Kalevankatu 16  
00100 HELSINKI 10, Finland

The Library  
Institut National d'Etudes  
Démographiques  
27 Rue du Commandeur  
75675 PARIS Cedex 14, France

The Library  
National Statistical Service of Greece  
14-16 Lycourgou Street  
ATHENS, Greece

Statistisches Bundesamt  
Bibliothek, Dokumentation, Archiv  
Postfach 55 28  
D 6200 WIESBADEN 1, Fed. Rep.  
of Germany

The Librarian  
Central Statistics Office  
Earlsfort Terrace  
DUBLIN, Ireland

Centraal Bureau voor de Statistiek  
Bibliotheek en Documentatie  
Prinses Beatrixlaan 428  
VOORBURG, Netherlands

The Library  
Central Bureau of Statistics  
P.B. 8131, Oslo Dep.  
OSLO 1, Norway

Central Statistical Library  
al. Niepodleglosci 208  
00-925 WARSAW, Poland

Biblioteca  
Instituto Nacional de Estatistica  
Avenida António José de Almeida  
LISBON - 1, Portugal

Glasgow University Library  
Hillhead Street  
GLASGOW G12 8QE, Scotland

Statistiska Centralbyrån  
Biblioteket  
Fack  
S-102 50 STOCKHOLM, Sweden

103

**The Librarian**  
United Nations Economic Commission  
for Europe (ECE)  
Palais des Nations  
CH-1211 GENEVA 10, Switzerland

**The Library**  
State Institute of Statistics  
Necatibey Caddesi No. 114  
ANKARA, Turkey

**The Librarian**  
London School of Hygiene and  
Tropical Medicine  
Keppel Street  
LONDON WC1E 7HT, U.K.

**The Technical Information Office**  
David Owen Centre for Population  
Growth Studies  
University College  
P.O. Box 78  
CARDIFF CF1 1XL, Wales, U.K.

**Middle East**  
**The Library**  
Department of Statistics and Research  
Ministry of Finance  
NICOSIA, Cyprus

**The Librarian**  
Cairo Demographic Centre  
6 Taha Hussein Street, Zamalek  
CAIRO, Egypt

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Central Bureau of Statistics  
P.O. Box 13015  
JERUSALEM, Israel

**The Library**  
The Hashemite Kingdom of Jordan  
Department of Statistics  
P.O. Box 2015  
AMMAN, Jordan

**Director General**  
Census and Statistics Department  
Ministry of Planning and Scientific  
Research  
Shaira Damascus  
TRIPOLI, Libyan Arab Republic

**The Library**  
Central Bureau of Statistics  
Office of the Prime Minister  
DAMASCUS, Syrian Arab Republic



THE ... PROGRAMME - DECEMBER 1976  
 PROPORTIONAL TO POPULATION)

- = 1 million people
  - = Developing country
  - ▨ = Developed country
  - ▤ = Future enrolment expected, developing country
  - = No definite information
- } Survey completed, ongoing or firmly committed

